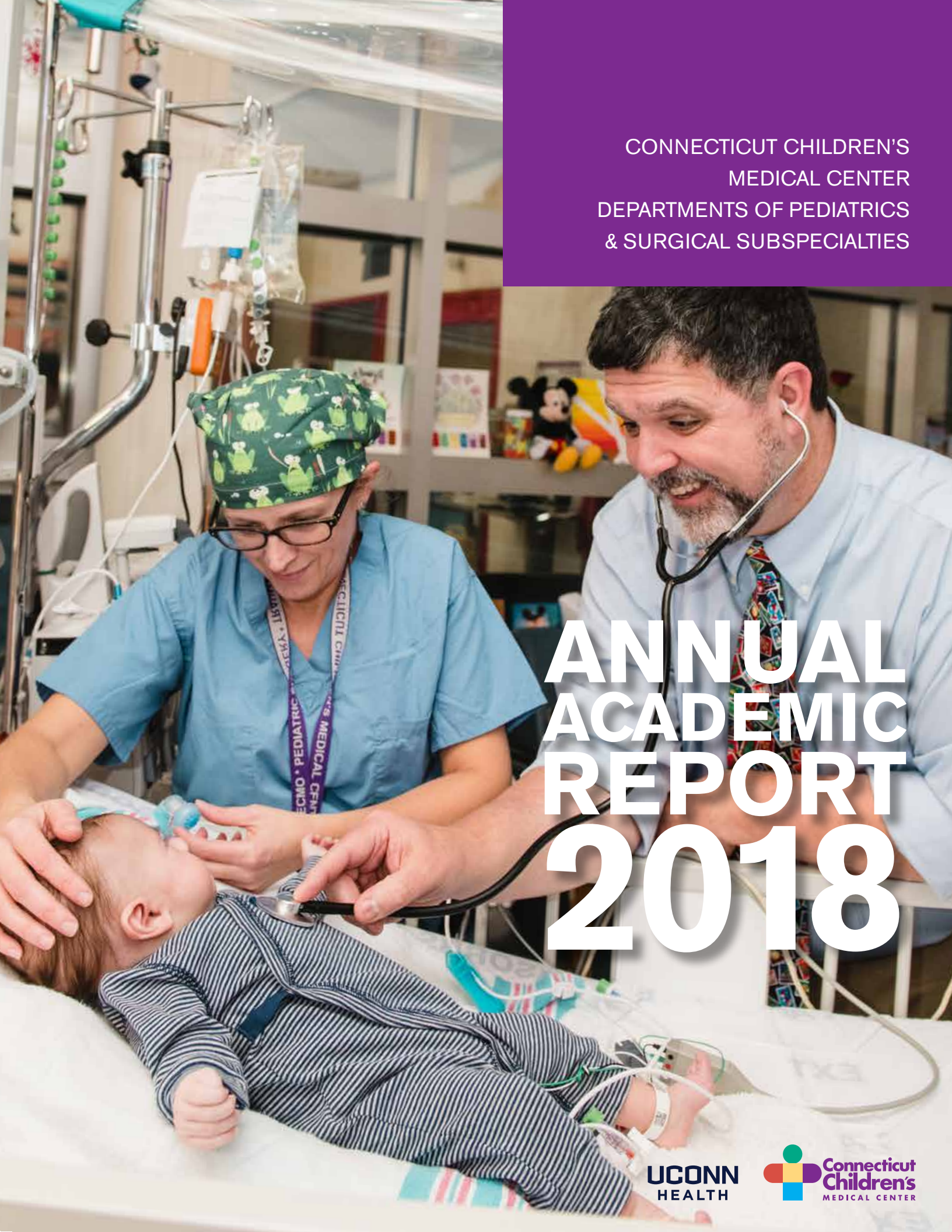


CONNECTICUT CHILDREN'S  
MEDICAL CENTER  
DEPARTMENTS OF PEDIATRICS  
& SURGICAL SUBSPECIALTIES

# ANNUAL ACADEMIC REPORT 2018

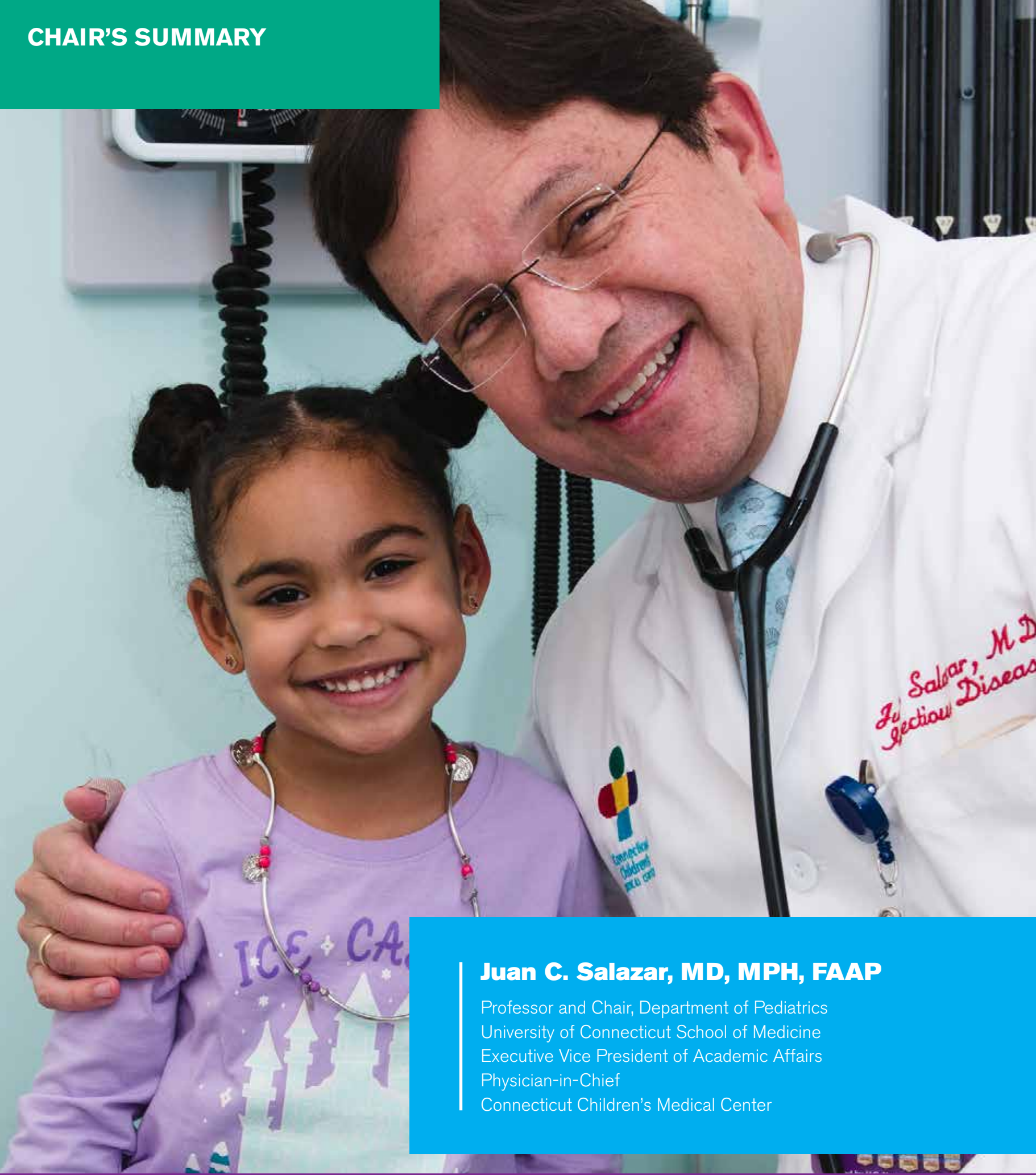






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**Juan C. Salazar, MD, MPH, FAAP**

Professor and Chair, Department of Pediatrics  
University of Connecticut School of Medicine  
Executive Vice President of Academic Affairs  
Physician-in-Chief  
Connecticut Children's Medical Center

Dear Colleagues & Friends,

The year 2018 was marked by great achievement, growth, and excitement for the Department of Pediatrics and for Connecticut Children's Medical Center. It is once again my pleasure to present our combined annual report for the Departments of Pediatrics and Pediatric Surgical Subspecialties, and to share just a few of the many highlights of our last year together. As we prepared this year's report, I took note of the steadily increasing number of faculty awards, complex and innovative research, and the recognition we earned on local, national, and international stages. There is no doubt of our many evolving, multidisciplinary contributions to academic medicine.

Connecticut Children's once again received *U.S. News & World Report* recognition as one of the country's best children's hospitals for 2018-2019, with rankings for our divisions of Neonatology, Cardiology and Heart Surgery, Diabetes and Endocrinology, and Urology among the best in the nation. For the second consecutive year, Connecticut Children's also received the *Women's Choice* and *Most Wired* awards.

Our presence on the national stage was noted by such honors as the Richard Rivas Memorial Teaching Award to Dr. James Moore, and the American Health Council's Leaders in Medicine Award to Dr. Cynthia Silva, as well as multiple posters and presentations. Dr. Glenn Flores drafted 2018 legislation that was signed into law by Congress and the President of the United States as part of CHIP reauthorization. Our faculty and staff continued to be expert sources for the media on a wide variety of pediatric health issues throughout the year.

The work done by all of our researchers in 2018 was truly remarkable. We celebrated alongside Dr. David Weinstein as he conducted the world's first gene therapy clinical trial for Glycogen Storage Disease (GSD), and we noted a 27 percent rise in our published peer-reviewed manuscripts, from 143 in 2017, to 182 in 2018. Dr. Ching Lau's article in *Nature* and Dr. Emily Germain-Lee's article in *Nature Reviews Endocrinology* were among our 2018 publications.

Our continuum of quality medical education continued to evolve. Our pediatric rotations for third and fourth year medical students remain among the most highly rated at the UConn School of Medicine. Under Dr. Melissa Held's leadership, our medical students successfully embarked upon the clinical years of their new MDelta curriculum, which focuses more on collaborative group learning than didactic sessions. Our residency and fellowship programs continue to attract and graduate highly accomplished residents and fellows. Our academic achievements included over 800 academic presentations,

278 publications including peer-reviewed PubMed publications, book chapters, and educational resources; 831 committees; 365 new grants and program applications; participation in at least 343 educational development activities; 190 precepting/consulting activities, and 35 studies/assessments. We expanded our Maintenance of Certification Portfolio status to now include accreditation by the American Board of Medical Subspecialties as well as the American Board of Pediatrics. A testament to our numerous, high quality Continuing Medical Education (CME) activities was the re-accreditation of our Office of CME through 2022 by the Connecticut State Medical Society.

Of special note, our team successfully completed the Department of Pediatrics nine-year review. In preparation for the November 30th site visit, the department conducted a 10-month self-study led by Dr. Francis DiMario and Esperanza Lesmes. In my five years as department chair, not a day has gone by that I haven't been in awe of the tremendous work and dedication of our faculty and staff. Nothing, however, prepared me for the overwhelming pride I felt when reviewing the collection of achievements, changes, and hard work that have taken place since the 2009 self-study.

Our many successes would not be possible without the generous and genuine support from Bruce Liang, Dean of the UConn School of Medicine, and the academic leadership at the School of Medicine and UConn Storrs, as well as Connecticut Children's Chief Executive Officer Jim Shmerling, Chief Operating Officer Gil Peri, CCSG Practice President Glenn Focht, MD, my colleagues on the Executive Management Team, and the members of the Board of Directors.

In the pages that follow, you will find exciting and inspiring examples of the excellence, achievement and compassionate care that defines the Department of Pediatrics and Connecticut Children's. I am proud to represent our outstanding faculty and staff, and to stand alongside them all in support of our mission and vision to serve the patients and families of Connecticut.

Sincerely,

**Juan C. Salazar, MD, MPH, FAAP**  
Professor and Chair, Department of Pediatrics  
University of Connecticut School of Medicine  
Executive Vice President of Academic Affairs  
Physician-in-Chief  
Connecticut Children's Medical Center



Dear Colleagues & Friends,

It is with great pleasure that we present the ninth annual report from the Department of Pediatric Surgical Subspecialties of Connecticut Children's Medical Center and the fifth combined report with the Department of Pediatrics. This report continues to reflect the solid alignment between Surgery and Pediatrics and the continued multidisciplinary growth of combined surgical and pediatric programs at Connecticut Children's.

In 2018, we were pleased to earn national recognition for several of our medical and surgical divisions. *U.S. News & World Report* ranked Connecticut Children's divisions of Neonatology, Cardiology and Heart Surgery, Diabetes and Endocrinology, and Urology as among the best in the country. In addition, Connecticut Children's again earned the designation of a Best Children's Hospital from the Women's Choice Award®.

Over the last year we have seen several key recruitments and significant growth in surgical volume. Dr. Dennis Mello joined us and has expertly treated numerous complex congenital heart conditions over the last year. Dr. Lee Pace, our sports medicine surgeon, led the nation in arthroscopic trochleoplasty, a non-invasive procedure ideal for the treatment of trochlear dysplasia, a debilitating congenital condition that causes the kneecap to pop out unpredictably. We welcomed a new Division of Ophthalmology and recruited Dr. Paul J. Rychwalski from the Concord Eye Center in New Hampshire to serve as division chief.

Throughout 2018, the surgical services continued to experience growth, performing procedures on over 11,070 children with over 2,511 cases performed at our ambulatory surgery center in Farmington, CT. Some of this growth has been supported by the opening of our third operating room in March 2018. We continue to aggressively pursue our vision to bring the very best surgical care to the children of the region while simultaneously pursuing our two other core missions: research and education.

Some specific highlights from the past year: Innovation through research is integral to the mission of the department. We continue to focus efforts on children with solid tumors, premature lung disease, esophageal disease, injury prevention, and sports-related injuries. Several federal grants and invention patents were submitted over the past two years focusing on diagnosis and treatment of these diseases. In the coming year our new pediatric urologist, Dr. Courtney Rowe, will be focusing efforts on tissue-engineering a urethra – a largely unexplored field that has the potential to have significant impact on children. Finally, we are continuing to develop an Innovation Center to harness new ideas generated by the faculty.

Connecticut Children's Medical Center remains the exclusive site for pediatric surgical subspecialty training for the University of Connecticut School of Medicine surgical residency programs. Annually, dozens of residents from the University of Connecticut and other institutions receive their required pediatric surgical experience at Connecticut Children's. The Pediatric General Surgery, Pediatric Orthopaedics, and Pediatric Anesthesia programs continue to train the future leaders in surgical subspecialties and have graduated several successful fellows in the last year.

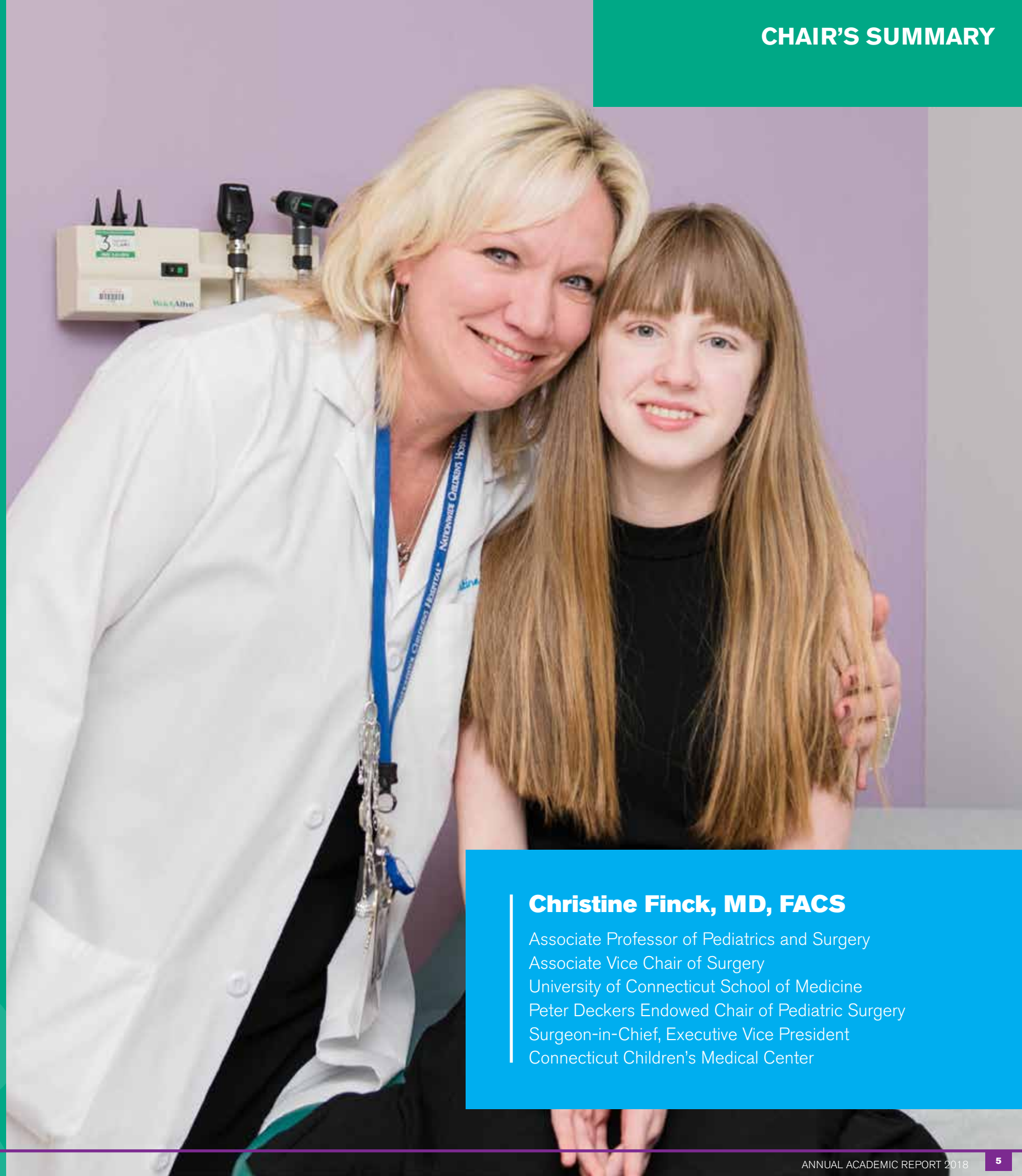
As we continue to champion innovation and education, we remain focused on providing the highest quality, state-of-the-art care for children of the region.

Sincerely,



**Christine Finck, MD, FACS**

Associate Professor of Pediatrics and Surgery  
 Associate Vice Chair of Surgery  
 University of Connecticut School of Medicine  
 Peter Deckers Endowed Chair of Pediatric Surgery  
 Surgeon-in-Chief, Executive Vice President  
 Connecticut Children's Medical Center



**Christine Finck, MD, FACS**

Associate Professor of Pediatrics and Surgery  
 Associate Vice Chair of Surgery  
 University of Connecticut School of Medicine  
 Peter Deckers Endowed Chair of Pediatric Surgery  
 Surgeon-in-Chief, Executive Vice President  
 Connecticut Children's Medical Center

CHAIR





# HIGHLIGHTS

We are honored to present highlights from the fifth combined *University of Connecticut and Connecticut Children's Medical Center Departments of Pediatrics and Pediatric Surgical Subspecialties Annual Academic Report 2018*. The report reflects the alliance between Surgery and Pediatrics and the continued multi-disciplinary growth of combined surgical and pediatric programs at Connecticut Children's Medical Center.

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■ To view the complete 2018 Annual Academic Report, please visit:  
<https://www.connecticutchildrens.org/newsroom/publications/>



## CLINICAL ACHIEVEMENTS



The U.S. Food and Drug Administration approved the world's **first gene therapy clinical trial for Glycogen Storage Disease (GSD)**. This ground-breaking clinical trial focusing on GSD Type Ia was hosted by the GSD Program at Connecticut Children's and UConn Health under the direction of pediatric endocrinologist and scientist David Weinstein, MD, MMSc. Patients with this condition travel to Connecticut Children's from 49 states and 49 countries to receive care.

*U.S. News & World Report* ranked the **Neonatology program**, under the leadership of James E. Moore, MD, PhD, the highest in the state and among the Top 30 programs nationally out of more than 1,500 NICUs (neonatal intensive care units) across the country.

On July 1, Connecticut Children's, through our Care Alliance with Western Connecticut Health Network, officially launched **Neonatology services in Danbury and Norwalk Hospital NICUs**. This launch presents an opportunity to make Connecticut Children's nationally ranked Neonatology program available to more babies throughout the state.

Lee Pace, MD, an orthopaedic surgeon with Connecticut Children's Elite Sports Medicine, performed **the nation's first arthroscopic trochleoplasty** at our surgery center in Farmington. The minimally invasive knee procedure is designed

to correct trochlear dysplasia — a congenital malformation of the knee joint affecting the kneecap. Connecticut Children's is at the forefront in the treatment of this condition, which can limit a child's mobility and ability to take part in sports, and potentially lead to depression.

Throughout 2018, Brendan Campbell, MD, MPH, FACS, medical director of the Pediatric Trauma Program, chief Surgical Quality and Safety Officer, and Donald W. Hight Endowed Chair for surgery, served on the **American College of Surgeons Committee on Trauma (ACS COT) Firearm Strategy Team (FAST) Workgroup**, a geographically diverse team of 18 American surgeons who are firearm owners. In a major article published by the *Journal of the American College of Surgeons*, the group issued 13 recommendations for the prevention of firearms injuries. The article drew significant attention from national media sources, and Dr. Campbell was interviewed on CNN and by Slate Media. He continues to be involved as a leading voice regionally and nationally in advocating for a new approach to the prevention of firearms injuries.

Connecticut Children's welcomed long-term community colleagues, Children's Eye Care, into Connecticut Children's Specialty Group, and created a **new Division of Ophthalmology**. The group's dedicated physicians, optometrists, and staff are now integrated into the Connecticut Children's health system in the service of our patients.

Connecticut Children's acquired **HeadZone**, a comprehensive pediatric concussion care practice in Shelton, CT. HeadZone, now a Connecticut Children's Medical Center Concussion Clinic, specializes in the care of pediatric patients ages 5 to 22 years, who have sustained sports-related head injuries. Patients and families of HeadZone now receive sports-related concussion care from David Wang, MD, and Megan Bromley, PA-C, both from our Division of Sports Medicine.

The Adult Congenital Heart Association awarded the **Connecticut Adult Congenital Heart (CTACH) service** a status of an ACHA ACHD Accredited Comprehensive Care Center. This accreditation is valid for a five-year period. The program is the first and only in Connecticut and the 23rd nationally to earn this accreditation.

The Pulmonology Division's **Cystic Fibrosis Newborn Screening Program** was ranked No. 1 nationally by the Cystic Fibrosis Foundation for the lowest median age for time to diagnosis of CF with infants who have a positive newborn screening.

The Connecticut Children's **Extracorporeal Membrane Oxygenation (ECMO) program**, led by medical director

Heather Schlott, MD, was recognized for the second time with the Extracorporeal Life Support Organization's (ELSO) Silver Award for centers on a Pathway to Excellence in Life Support. This is the highest achievement possible at Connecticut Children's current ECMO patient volume.

The Connecticut Children's **Epilepsy Center**, directed by Jennifer Madan Cohen, MD, received accreditation by the National Association of Epilepsy Centers as a Level 3 Epilepsy Center.

The **Center for Motion Analysis**, directed by orthopaedic surgeon Kristan Pierz, MD, and Sylvia Öunpuu, MSc, achieved full accreditation by the Commission for Motion Laboratory Accreditation.

Cynthia Silva, MD, FAAP, division head of Nephrology, and David Sink, MD, of Neonatology performed Connecticut Children's **first inpatient telemedicine consult**. The patient, a baby receiving care in our NICU at UConn Health, was born without one kidney and required a nephrology consult before being discharged home.







**AWARDS & HONORS**

**Anton Alerte, MD**, director of Clinical Medicine Courses at the University of Connecticut School of Medicine, received the 2018 COMSEP Award of Excellence for his research poster titled “The Decline in Community Preceptors: An Exploration of Pediatricians Who No Longer Teach Medical Students.”

The Faculty Award for Excellence in Teaching at an Affiliated Institution (St. Francis Hospital, Burgdorf/Bank of America Clinic, and UConn Health) was presented to **Anton Alerte, MD**, and **Naveed Hussain, MD**.

**Gyula Acsadi, MD**, division head of Pediatric Neurology, was recipient of the Physician of the Year Award from the Connecticut Children’s Medical Staff Nominating Committee.

Connecticut Children’s Medical Staff Nominating Committee named **Michael Bourque, MD**, of Pediatric Surgery, 2018 Physician of the Year, and **Felicia Wilion, MD**, 2018 Community Physician of the Year.

**Brendan Campbell, MD, MPH, FACS**, was appointed vice chair of the Injury Prevention and Control Committee for the American College of Surgeons Committee on Trauma.

**Christopher Carroll, MD**, of the Critical Care Division, was awarded the Presidential Citation from the Society of Critical Care Medicine and the Distinguished Chest Educator Award from the journal *Chest*.

Orthopaedic surgeon **Sonia Chaudhry, MD**, was awarded the prestigious ASSH/AFSH 2018-2019 International Hand Surgery Fellowship to Ganga Hospital, Coimbatore, India.

**Francis DiMario, MD**, member of the Division of Pediatric Neurology, was selected as a member of the Child Neurology Society (CNS) Archives Committee and Planning Committee for the CNS 50th Anniversary.

Connecticut Children’s Surgeon-in-Chief and Peter Deckers Endowed Chair of Pediatric Surgery **Christine Finck, MD, FACS**, was honored with a Women of Innovation award by the Connecticut Technology Council (CTC). She was recognized and awarded for her Research Innovation and Leadership. The Women of Innovation program seeks to celebrate and create a growing network of women in the trenches of STEM.



**Glenn Flores, MD, FAAP**, division head of Research, has been appointed associate editor of the *Journal of Immigrant and Minority Health*.

**Patricia Garcia, MD**, was honored with the Douglas H. MacGilpin Community Physician Award for recognition as an Outstanding Role Model.

**AnnMarie Golioto, MD**, was selected as medical director at Connecticut Children's NICU East (Hartford), and regional clinical director of the Hartford Healthcare Newborn Network. She also will play a pivotal role in the construction of our new, Level IV NICU in Hartford.

**Ahmet (Semih) Gork, MD**, was appointed to serve as medical director of NICUs at the Hospital of Central Connecticut in New Britain and MidState Medical Center in Meriden.

**William Graf, MD**, was appointed chair of the Child Neurology Society Ethics Committee.

**Melissa Held, MD**, was appointed associate pediatric residency program director for remediation.

**Donald W. Hight, MD**, was awarded the Leon Chameides Lifetime Achievement Award for Outstanding Leadership.

The Faculty Award for Excellence in Teaching was presented to **Kathy Kalkbrenner, MD**, and **Patricia Garcia, MD**.

**Sherene Mason, MD**, received the 2018 Outstanding Young Alumni Award from the University of Connecticut's H. Fred Simons African American Cultural Center.

**James E. Moore, MD, PhD**, division head of Neonatology, was awarded the 2018 Richard Rivas Memorial Teaching Award at the Specialty Review Conference in Neonatology in Orlando, FL. The award recognizes leaders in the field of neonatology and their dedication to teaching at the national level.

**Nicole Murray, MD**, director of the Center for Airway, Voice, and Swallowing, taught the pediatric component of the first United States session of the international course, "The Altered Airway," which is sponsored by the Global Tracheostomy Collaborative.

**Christine Ohannessian, PhD**, was named associate editor for the *Journal of Emerging Adulthood*.

**Juan C. Salazar, MD, MPH, FAAP**, Physician-in-Chief and Executive Vice President of Academic Affairs at Connecticut Children's, and Chair of the Department of Pediatrics at University of Connecticut Health Center, was appointed to the federal Tick-Borne Disease Working Group of the Department of Health and Human Services (HHS). Dr. Salazar and his colleagues at the UConn Health are actively studying the immune response of children and adults who become infected with Lyme disease.

**Anand Sekaran, MD**, division head of Hospital Medicine, was selected as one of 12 members nationally on the AAP PHM PREP Editorial Board, to create the first practice exam for board certification in Pediatric Hospital Medicine.

**Cynthia Silva**, division head of Nephrology and medical director of the Center for Kidney and Bladder Disorders, received the American Health Council's Leaders in Medicine award for exhibiting exemplary conduct and expertise in her field.

**David Sink, MD**, of the Neonatology Division, was appointed regional clinical director for NICU West, ECHN and WCHN. He also will serve as physician quality and safety officer for the entire Neonatal service line, and will continue as medical director for Connecticut Children's NICU West (Farmington).

**Christine Skurkis, MD**, was appointed to the role of vice chair of the Curriculum Learning Community by the Association of Pediatric Program Directors Board (APPD).

**Min Tang-Schomer, PhD**, was selected winner of the Life Sciences – Article of the Year for her March 10, 2017 publication, "3D Bioengineered Brains – A New Approach to Personalized Cancer Therapy."

**David Weinstein, MD**, was reappointed for another three-year term of the National Institute of Child Health and Human Development (NICHD) Pediatrics (CHHD-A) grant review committee.

**Edwin Zalneraitis, MD**, director of the Pediatric Residency program, was recipient of the Milton Markowitz Award for Outstanding Contributions to House Staff Education and Career Development.



## FACULTY PROMOTIONS

Kristan Pierz, MD, to Associate Professor of Orthopaedic Surgery; Katherine Kavanagh, MD, to Associate Professor of Pediatric Surgery; Thyde Dumont-Mathieu, MD, Alex Golden, MD, Wael Sayej, MD, Adam Silverman, MD, Christine Skurkis, MD, and Michael Soltis, MD, to Associate Professor of Pediatrics; promotion of Karan Emerick, MD, to Professor of Pediatrics; appointment of Beth Nath, MD, to Associate Professor of Pediatrics, and Glenn Flores, MD to Professor of Pediatrics. Junior Promotions: Susan DiVietro, PhD and Taryn J. Hamre, DNP, APRN to Assistant Professor of Pediatrics.

## FACULTY APPOINTMENTS

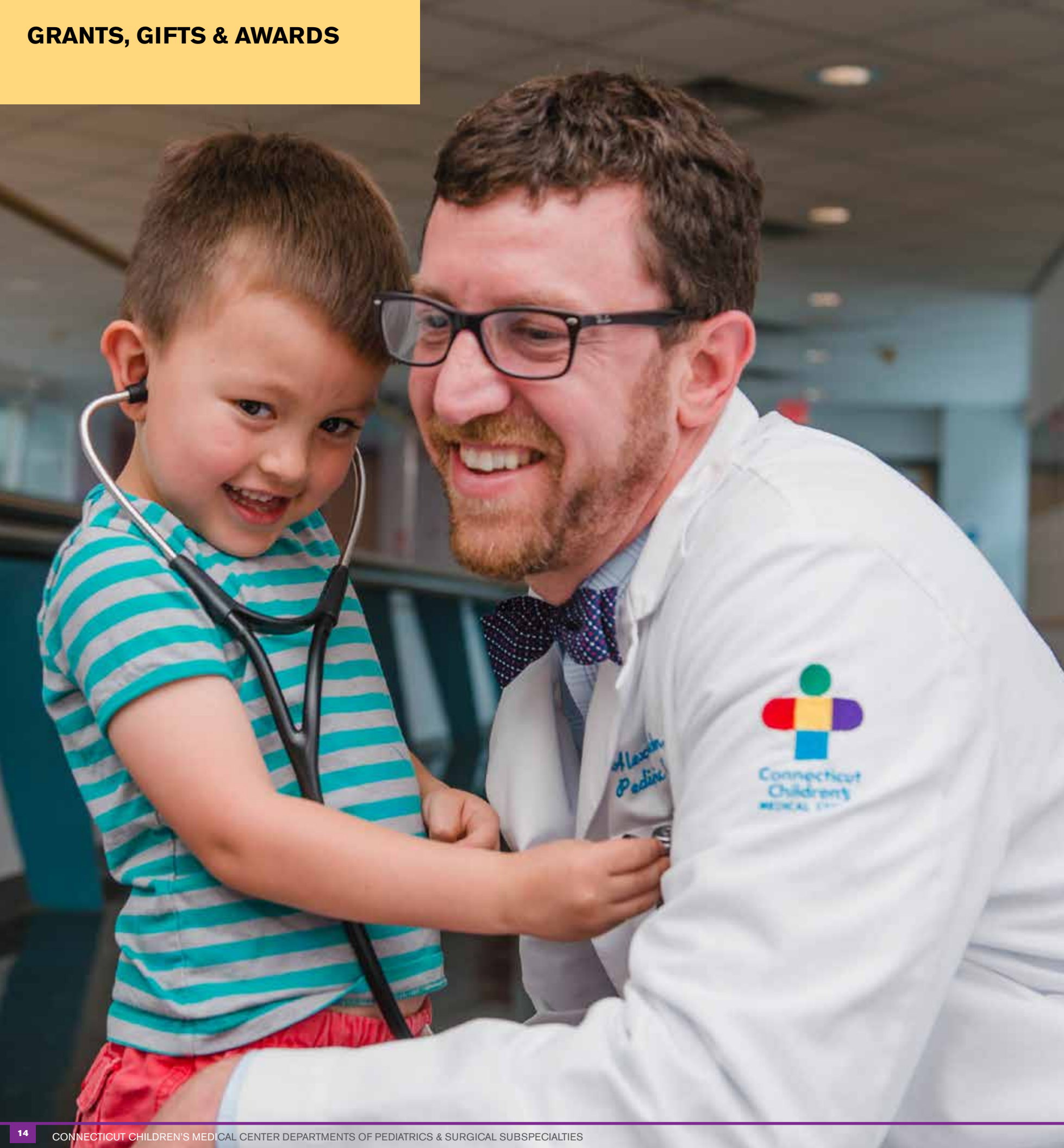
New faculty members: Dennis Mello, MD, Cardio/Thoracic Surgery; Paul Rychwalski, MD, Ophthalmology; Joseph Viterito, MD, and Arvin Bundhoo, MD, Neonatology, St. Vincent's Hospital; Alexandra Channing, MD, Cardiology; Susan Dellert, MD, Developmental Pediatrics; Robyn Matloff, MD, Nephrology; Donald Sampson, MD, and Krishanti Satchi, MD, IMT/

WCHN-Danbury; Amanda Begley, MD, Alicia Briggs, MD, Lauren Bader, MD, and Juan Vasquez, MD, IMT/WCHN-Norwalk; Kelly Hawley, PhD, Infectious Diseases; Brett Citarella, MD, Catherine Hansen, MD, Alaina Pyle, MD, Morgan Spaight, MD, and Jeffrey Bartlett, DO, NICU/WCHN-Danbury; James Belisle, MD, and Melten Seli, MD, NICU/WCHN-Norwalk; Logan Jerger, MD, Gastroenterology; Jessica MacCormac, DO, Adolescent Medicine; Caleb Wasser, DO, and Caroline Amin, MD (Primary Care-CHC); Jane Im, MD, Allyson McDermott, MD, and Melanie Rudnick, MD, Hospital Medicine; Nordie Bilbao, MD, and Angela Verardo, MD, Endocrinology; Elizabeth Ng, MD, Neurology.

Community-based Faculty: Susan Adeyinka, MD, Christopher DeSanto, MD; Robert Dudley, MD, Susan Lelko, MD, Tricia Pinto, MD, Bhavna Sacheti-Singh, MD, Julie Schiff, MD, Nicole Taylor, MD, Persis Thomas, MD, and Michael Yenko, MD, Student Continuity Practice (UConn Health)

Joint Appointment: Craig H. Kennedy, PhD., Provost, UConn Health, Storrs.





The CT Department of Public Health awarded Connecticut Children's the Newborn Screening Grant, a total of 1.7 million dollars over three years. Project directors **Karen Rubin, MD**, and **Joseph Tucker, MD**, led a team including **Nicholas Bennett, MBBChir, PhD**, **Donna Boruchov, MD**, and **Emily Germain-Lee, MD**, along with Connecticut Children's Foundation staff members Molly Dworkin and Mana Zarinejad, and Grants & Sponsored Programs department members Terry Dehnel and Kimberly Davey.

**Christine Finck, MD, FACS**, and her combined Connecticut Children's, UConn Health, and Biostage teams were notified in early February 2018 that the NIH intends to fund their Phase I/Phase II Fast Track small business grant for 1.6 million dollars.

The **University of Connecticut's annual HuskyTHON** raised more than 1.3 million dollars for Connecticut Children's. This makes HuskyTHON the largest revenue-generating event after expenses for Connecticut Children's.

**Christopher Carroll, MD**, from the Critical Care Division, was awarded a grant from the Institute for Collaboration on Health, Intervention, and Policy (InCHIP) at the University of Connecticut to study how patients and clinicians are using social media to communicate and interact.

**Youngmok Lee, PhD**, received approval from the Children's Fund for Glycogen Storage Disease Research to fund his grant "Research Development to Improve the Efficacy of AAV Mediated Gene Therapy in GSD-1a Mouse Model."

Donor Ross Mayer committed to creating the Ross Mayer Endowment Fund for the NICU in honor of his son, Spencer David Mayer. Mr. Mayer committed \$250,000, a sum that will be matched to create a \$500,000 endowment. This is the largest endowed fund for any division at the medical center. Mr. Mayer surprised **James Moore, MD, PhD**, division head of Neonatology, with the gift. He was particularly inspired to create it after *U.S. News & World Report* ranked Connecticut Children's NICU No. 1 in the state.

With a generous gift from the Mandell-Braunstein family, Connecticut Children's Center for Digestive Diseases established an endowed chair for Pediatric Inflammatory Bowel Disease (IBD), and has devoted resources to finding a cure for IBD. The inaugural holder of the Mandell-Braunstein Family Endowed Chair is **Jeffrey Hyams, MD**, head of the Division of Digestive Diseases, Hepatology and Nutrition, and director of the Center for Pediatric Inflammatory Bowel Disease.

**William Zempky, MD**, received a two-year grant from the MayDay Fund. This grant will support a working group to develop the Pediatric Pain Fellowship training for pediatricians.





*Connecticut Children's Medical Center strives to encourage, support, and recognize the academic activities and achievements of its Departments of Pediatrics and Surgical Subspecialties faculty and staff. The mission of our Academic Affairs office is to empower faculty, medical learners, and community providers to succeed in their academic, professional development, research, and quality improvement pursuits by providing critical and timely administrative, technical, and educational support. Our scope of work includes oversight of our Pediatric subspecialty fellowship programs, faculty professional development including Continuing Medical Education (CME) and Maintenance of Certification (MOC), faculty appointments and promotions, departmental strategic planning and more.*

The Department of Pediatrics is fortunate to have a very strong presence and administrative support on both the University of Connecticut Health Center (UConn Health) and Connecticut Children's campuses. With faculty based at multiple institutions, administration of the Department of Pediatrics is comprised of centrally managed academic functions for affiliated faculty, and decentralized business and research management functions for all faculty.

The Chair's Office, staffed at Connecticut Children's, manages academic appointments, reappointment and promotion activities, merit tracking for in-residence and affiliated faculty, and produces the *Departments of Pediatrics and Surgical Subspecialties Annual Report*. All administrative staff in the Chair's Office work closely together and maintain daily communication with the Department of Pediatrics Academic Office at UConn Health. The department staff manages our general fund academic budgets, including tenured faculty support, components of the residency budget, discretionary accounts, and UConn Health-based sponsored programs. Staff members also serve as the support and key logistical link between the decentralized offices within other institutions/departments and UConn Health's administrative and financial offices. Much of the research and other sponsored activity of our faculty is administered by office staff where the faculty members are based, such as the Office of Grants and Sponsored Programs (page # 126), and the Department of Research (page # 102) at Connecticut Children's.

In 2018, the office of Academic Affairs continued to implement the Department of Pediatrics three-year (2016-19) strategic plan, and support the Departments of Pediatric Surgery three-year (2017-20) strategic plan.

The academic operations are staffed by Esperanza Lesmes, senior academic operations program manager; with assistance from Deborah Hornblow, per diem editor, and include the following offices:

### Faculty Appointments and Promotions

In 2018, eight faculty members from the Department of Pediatrics and one faculty member from the Division of Orthopaedic Surgery were promoted to senior rank, effective Sept. 10, 2018. In addition, nominations for appointments for two newly hired faculty that were submitted to the Senior Appointments and Promotions Committee (SAPC) were granted the appointment to senior rank. Twenty-eight new members from the Department of Pediatrics that includes two hospitalist members from WCHN-Danbury; two hospitalist members from WCHN Norwalk; five neonatal intensive care unit (NICU) members from WCHN-Danbury; two NICU members from WCHN-Norwalk; two NICU members from St. Vincent's Hospital; two members from the Departments of Surgery; and one members from the Orthopaedics Division were provided with junior faculty appointments. Also, nine UConn Health preceptors from the Clinical Longitudinal Immersion in the Community (CLIC) program were provided with a community-based faculty appointment in the Department of Pediatrics.

### Continuing Medical Education (CME)

Supported by Diane Mouradjian, Brenda McCauliff, Elizabeth Anderson, who joined us in September, and Kenneth Spiegelman, MD, the Office of CME dedicated 2018 to updating its application submission processes, modernizing its data and compliance tracking methods, and laying the foundation for a more lean office and diverse CME portfolio beginning in the 2018-19 academic year. After a comprehensive self-study, site visit and panel review, the Office of Continuing Medical Education received re-accreditation in March 2018 through the year 2022 by the Connecticut State Medical Society (CSMS), an organization sponsored by the Accreditation Council of Continuing Medical Education (ACCME). Of special note by the review committee was the high quality of educational offerings that are prepared and facilitated through our office. In 2018, our overall grand rounds lecture evaluation score for the year's 40 speakers was among the highest in the series' history, we hosted over 15 visiting lecture speakers from children's hospitals and universities across the country, and for the first time, we awarded MOC Part 2 credits to CME credit recipients.

### Fellowships

Marianne Custer, fellowship program manager, and fellowship program coordinators Amanda Ross, Kierstyn Callahan and Lindsay Haythorn supported 11 pediatric subspecialty and surgical fellowships and 22 fellows.

In 2018, the pediatric fellowship programs graduated seven fellows and successfully filled eight of 11 available fellowship positions. In preparation for the 2019-20 academic year, coordinators effectively supported recruitment of 126 applicant interviews across 50 days. Following a successful site visit in late 2017, the Pediatric Anesthesiology Fellowship Program received continued accreditation in 2018. Marianne, Lindsay

and Amanda presented our unique "coordinator model" at the national 2018 Accreditation Council of Graduate Medical Education (ACGME) Annual Conference in Orlando, FL. Marianne and Lindsay also presented the super coordinator model at the national 2018 Spring Association of Pediatric Program Directors (APPD) Meeting in Atlanta, GA.

### Practice Quality Improvement and Maintenance of Certification

Eminet Abebe Gurganus, program development and implementation manager, along with Cabrini Merclean, program manager, collaborated with faculty and community partners to develop four new QI/MOC activities for a total of 31 projects (12 internal for Connecticut Children's physicians and 19 community-focused). In addition to our MOC Portfolio accreditation status with the American Board of Pediatrics (ABP), in October, Connecticut Children's received MOC Portfolio accreditation from the American Board Medical Subspecialties (ABMS). QI/MOC projects promote quality improvement efforts within the hospital and serve as a bridge to the community to disseminate the hospital's excellent quality improvement work to regional practitioners. Eminet moved on from her role with Connecticut Children's in July of 2018. The generous support of United Healthcare continues to fund our PQI/MOC activities.

### Medical Photography

Erin Blinn-Curran, Connecticut Children's medical photographer, is the primary provider of medical and promotional photography for the institution. She supports photography needs in the craniofacial and bariatric clinics (over 1,302 clinic visits this year) and works closely with our SCAN (Suspected Child Abuse and Neglect) Program medical team. Erin also supports legal documentation requests, Continuing Medical Education, and public relations efforts through quality photographic images that enhance our website, publications, research articles and medical records. Erin took 275+ professional headshots and made 35+ department visits for photos in 2018 while also covering multiple events weekly throughout the institution. Photography highlights this year include our featured *U.S. News & World Report* campaign, multiple physicians in a research setting for the Connecticut Children's Foundation gala, and an ongoing effort to capture patient stories in collaboration with Corporate Communications in addition to images for the 2018 edition of the *Departments of Pediatrics & Pediatric Surgical Subspecialties Annual Report*.

### Departmental highlights over the last year include:

- In accordance with the University of Connecticut School of Medicine (SOM) bylaws and as requested by the Dean, Bruce Liang, MD, the Department of Pediatrics underwent its nine-year School of Medicine review in 2018. In preparation for the Nov. 30th site visit by the assigned reviewers, Drs. Rebecca Andrews, Lisa Chirch, Brenton



Gravelly, and Robert Vinci, the department conducted a 10-month self-study led by Dr. Francis DiMario, associate chair for Academic Affairs, and Esperanza Lesmes. The Review Committee report will be presented to all faculty, pediatrics staff, and executive leadership at the Feb. 5, 2019, Department of Pediatrics Town Hall meeting.

**Connecticut Children's Medical Center**

- Esperanza Lesmes**  
*Senior Academic Operations Manager*
- Brenda McCauliff**  
*Manager, Continuing Medical Education*
- Diane Mouradjian**  
*Continuing Medical Education Coordinator*
- Elizabeth Anderson**  
*Continuing Medical Education Coordinator*
- Marianne Custer**  
*Fellowship Program Manager*
- Lindsay Haythorn** (promoted to Endocrinology Practice Manager, Nov. 2018)  
*Fellowship Coordinator*
- Amanda Ross**  
*Fellowship Coordinator*
- Kierstyn Callahan**  
*Fellowship Coordinator*
- Cabrini Merclean**  
*Program Manager, Office for Community Child Health (OCCH)*
- Eminet Gurganus**  
*Program Development and Implementation Manager, OCCH and PQI/MOC*
- Erin Blinn-Curran**  
*Medical Photographer*

In October 2018, we received Maintenance of Certification (MOC) Portfolio status from the American Board of Medical Specialists (ABMS). This will allow us to expand our MOC offerings beyond the Department of Pediatrics beginning in 2019.

**STAFF**

**Annamarie Beaulieu, MPH, BBA,**  
*Senior Director, Academic Affairs, Grants and Sponsored Programs*

**UConn Health**

- Julie Vigil,**  
*Administrative Manager, Department of Pediatrics*
- Laurie Papacs,**  
*Administrative Officer, Department of Pediatrics*
- Rose Sierra**  
*Administrative Fiscal Assistant, Department of Pediatrics*



*In July 2018, the Division of Adolescent Medicine welcomed a second adolescent medicine physician, Jessica MacCormac, DO, MS. She joined the division after completing a fellowship in Adolescent Medicine at the Children's Hospital of Pittsburgh. Dr. MacCormac has special interests in the transition from pediatric to adult health care, as well as adolescents and young adults with chronic illness. She is a member of Connecticut Children's transition work group, which aims to improve the care of our transition-age youth.*

**Clinical Services**

The Division of Adolescent Medicine provides both primary care and specialty care to adolescents and young adults in a variety of clinical settings.

- *Connecticut Children's Adolescent Medicine Clinic in Farmington:* Since its creation in February 2017, the Adolescent Medicine Clinic has continued to expand, given an increase in patient volume. We provide the following consultative services to adolescents and young adults ages 10 to 24: medical management of eating disorders, menstrual disorders, Polycystic Ovary Syndrome (PCOS), sexually transmitted infection (STI) diagnosis and

- treatment, gynecologic exams, and contraception including same-day hormonal IUDs and the hormonal implant.
- **Connecticut Children's Primary Care at East/West Hartford:** In the fall of 2018, Drs. Alyssa Bennett and MacCormac began to provide primary care and consultative care of adolescents and young adults ages 13 to 21 within Primary Care.
- **Trinity College Health Center:** The fall of 2018 marked the third year of a partnership between Connecticut Children's and Trinity College Health Service. Dr. Bennett serves as the center's medical director. Drs. Bennett and MacCormac provide primary care, urgent care, and consultative care to Trinity's undergraduate students. They also coordinate access to both specialty care and emergency care at Connecticut Children's.

**Education**

Educating future pediatricians and pediatric subspecialists continues to be an essential part of our mission. University of Connecticut pediatric residents are required to complete a four-week Adolescent Medicine rotation during their second or third year of training. The residents work with Connecticut Children's providers as well as our community clinical partners during their rotation. The Division of Adolescent Medicine greatly appreciates the time commitment and excellent teaching of the following clinical preceptors and their colleagues:

- Elite Sports Medicine, Farmington, CT: David Wang, MD, MS, Medical Director
- Hartford Job Corps Center, Hartford, CT: Paul Clarke, MD, Medical Director
- Westminster School, Simsbury, CT: Davis Smith, MD, Medical Director
- Institute of Living Adolescent Day Program and CARES Unit, Hartford, CT: Jennifer Zajac, MD, and Jensi George, MD
- Women's Ambulatory Health Services, Teen Clinic and Family Planning Clinic, Hartford, CT: Sarah Lindsay, MD (previously Amy Nelson, MD)

**STAFF**

**Alyssa Bennett, MD, Division Head**  
**Jessica MacCormac, DO, MS**







*The Division of Anesthesiology is recognized for the outstanding clinical care and pain management services it provides. We are committed to advancing pediatric anesthesia care, providing cutting edge therapies for the management of acute and chronic pain, and educating the next generation of anesthesiologists and nurse anesthetists.*

The Division of Pediatric Anesthesiology draws on the long history of anesthesia excellence in Hartford, CT, to provide superb clinical care, innovative teaching, academic achievement and a commitment to patient safety. The division's successes depend on the exceptional collaboration of our physicians, nurse anesthetists, advanced practice nurses, and staff.

The division consists of 14 anesthesiologists and over 13 certified registered nurse anesthetists (CRNAs) and advanced practice nurses. The Connecticut Children's Hartford campus is our principal clinical site but we provide care at numerous locations throughout the greater capital area. At the main campus, we coordinate care for over 9,000 surgical patients of all ages and for complexities each year including elective and emergent surgery, trauma surgery, endoscopy, imaging and cardiac catheterization. Additionally, we care for over 1,500 children at the Ambulatory Surgery Center in Farmington. For patients requiring MRA, nuclear medicine, interventional radiology or transplant services at Hartford Hospital, we provide the necessary expertise and a familiar face. Urgent procedures at Connecticut Children's NICU in Farmington also are covered by our division. Our vision is to provide compassionate care with extraordinary expertise for children in Connecticut.

Dr. Mark Indelicato is collaborating with Dr. Marcus Bookland in the division of Neurosurgery, researching the role of miRNA in possible memory and cognitive dysfunction in pediatric patients exposed to general anesthesia. Dr. Michael Archambault, in addition to his work with simulation-based training of anesthesiology and otolaryngology residents, is director of our fellowship program. We offer a 12-month ACGME-accredited advanced fellowship (CA-4 year) to those interested in advancing their technical skills and clinical knowledge in pediatric anesthesiology. Drs. Craig Bonanni, division head of Anesthesiology, Ted Cortland and Indelicato are working with Dr. Brendan Campbell in General Surgery on projects using National Surgical Quality Improvement Project (NSQIP) data to evaluate antibiotic use in surgical patients and the risk of developing a hospital-acquired infection. Dr. Eapen Mathew spends time with the division of Pain and Palliative Medicine consulting on inpatients, seeing outpatients, performing therapeutic nerve blocks, and conducting research. Dr. Gregory Kernisan continues on the board of directors of the Haitian Health Foundation, overseeing health care and educational activities in Haiti. Drs. Amy Bouchard and Bonanni presented

management challenges of mediastinal masses at the annual meeting of the Society of Pediatric Anesthesia. Dr. Jay McIsaac, MD, MS, a founding board member of the Trauma Anesthesiology Society, the chair of Disaster Preparedness for the Connecticut State Medical Society, and a member of the American Society of Anesthesiologists (ASA) Committee on Trauma and Emergency, directed the first ever Hands-on Strategies for Managing Mass Casualties Workshop at this year's American Society of Anesthesiology Annual Meeting.

#### PUBLICATIONS

Biello C, Fernandez M, Rana A, Lerer T, et al., (**Bonanni C**, 6/7, Hyams J, 7/7). Effect of patient characteristics and pre-procedural midazolam on propofol dosing for esophagogastroduodenoscopy in children. *Clin Anesth Pain Manag*. 2018;1:003.

#### STAFF

**Craig Bonanni, MD, FAAP, Division Head**

**Edward Cortland, MD, FAAP, Assistant Division Head**

**Michael Archambault, MD**

**Christina Biello, DO**

**Cheryl Bline, MD**

**Amy Bouchard, DO, FAAP**

**John Garrison, MD**

**Thomas Golembeski, MD**

**Mark Indelicato, MD, MSc, FAAP**

**Gregory Kernisan, MD**

**Anil Mathew, MD, FAAP**

**Eapen Mathew, MD**

**Joseph McIsaac, MD, MS**

**Gregory Rutkowski, MD**

**Heather Allen, CRNA**

**Elizabeth Beatson, CRNA**

**Laura Covalli, CRNA**

**Kelly Gorski, CRNA**

**Allison Holtman, CRNA**

**Wendy Lord, CRNA**

**Barbara Richards, CRNA**

**Christine Rouleau, CRNA**

**Michelle Stevens, CRNA**

**Rachel Petree, CRNA**

**Cheyenne Douglas, APRN**

**Christine Grem, APRN**

**Alissa Zalewski, APRN**



The Asthma Center is the region's leader in pediatric asthma research and its premier resource for evidence-based asthma programs. We are dedicated to improving the health and well-being of children and families by conducting community-based collaborative research and programs. In doing so, the Asthma Center works to encourage, facilitate, and provide a mechanism for program dissemination and outcomes assessment of clinical and translational research conducted by investigators with and in community settings including schools, homes, community organizations, hospitals and ambulatory practice settings. The Asthma Center is committed to the training of investigators and community stakeholders in community-based research.

In 2018, the Asthma Center implemented a new strategic plan. The vision for the Asthma Center will be focused on developing and disseminating innovative approaches to improving the health and well-being of children, families, and communities. Using a public health approach, the Asthma Center will reduce health disparities and their determinants by conducting multi-faceted, interdisciplinary collaborative research on critical contemporary health issues facing children with asthma and establish optimal models of health management and best practices.

The flagship program of the Asthma Center, Easy Breathing©, was created by the Asthma Center founder, Michelle M. Cloutier, MD. Easy Breathing is based upon the National Heart, Lung, and Blood Institute's National Asthma Guidelines. There have been three revisions since the first *Guidelines for the Diagnosis and Management of Asthma* were originally released in 1991, most recently in 2007. A working group was established in 2018 to update the 2007 guidelines and is being chaired by Dr. Cloutier.

The Easy Breathing program continues to provide state-of-the-art asthma management guidelines to clinicians throughout Connecticut as well as across the country. Currently, Easy Breathing is active in three states – Ohio, Florida, and New Jersey. The Easy Breathing program also initiated a collaboration with the University of Florida at Gainesville to provide effective asthma care to residents living in two rural counties. In a patient-centered outcomes research-type of funding mechanism, we will provide asthma management expertise and training to researchers and community stakeholders with the goal of improving pediatric asthma outcomes among rural children in Florida.

Efforts are underway to digitize the Easy Breathing program. As a paper-based 20-year old program, we received funding from the Cigna Foundation to adapt the program for integration across electronic health records and school information systems. The goal of the project will be to determine the feasibility and acceptability of a tablet-based program among pediatricians in a busy federally qualified health center. Secondary outcomes will examine provision of guidelines-based asthma care, asthma health-care utilization, and school absences.

Our Easy Breathing for Schools program continues to gain recognition and expand across the state. In May 2018, Tregony Simoneau, MD, delivered a platform presentation on the effectiveness of the program in reducing overall school absences at the American Thoracic Society International Meeting in San Diego, CA. Similarly, Ms. Christine Langton delivered a workshop presentation at the National Association of School Nurses 50th Annual Conference in Baltimore, MD, in July 2018, on lessons learned from the program.

In February 2018, recruitment began for a randomized clinical trial in collaboration with CoHero Health and the Pulmonary Division to understand whether a mobile, sensor-based technology is effective at improving adherence to asthma therapy among adolescents with persistent asthma. Developed by CoHero Health, the smart sensor syncs with a smartphone app (BreatheSmart®) to remind participants to take their daily asthma therapy. Preliminary results for this study were presented by Ms. Ye Sun, an MD/MPH student at UConn Health, at the UConn Center for mHealth and Social Media Conference in May 2018.

Beginning in November 2017 and throughout 2018, Dr. Jessica Hollenbach and Ms. Sigrid Almeida began recruitment work on a project titled "Interrogating the Placental Microbiome Among Pregnant Women with Asthma." As a mentored clinical research award funded by the Robert E. Leet and Clara Guthrie Patterson Trust, Dr. Hollenbach continues to conduct this innovative study that examines the fetal and perinatal origins of childhood asthma among families disproportionately affected by this chronic disease.

Dr. Tregony Simoneau represented Connecticut Children's at the International Conference of the American Thoracic Society in May 2018 as the moderator of a poster discussion session titled "Pediatric Severe Asthma and Phenotyping." She also presented her poster, "Implementation of a Pediatric Severe Asthma Clinic Is Cost Effective," in the same session.

Dr. Simoneau continued recruitment for her mentored clinical research award by the Robert E. Leet and Clara Guthrie Patterson



Trust for the project titled "Identifying Biomarkers of Allergic Asthma: What Can the Long Non-coding RNA Tell Us?" This study is a collaborative effort with the Jackson Laboratory for Genomic Medicine in Farmington, CT. Additionally, Connecticut Children's was accepted as a satellite recruitment site for the NIH, multicenter trial, "Preventing Asthma in High Risk Kids (PARK)." This asthma prevention study will begin enrollment in January 2019.

## PUBLICATIONS

Szeffler SJ, **Cloutier MM**, Villarreal M, **Hollenbach JP**, Gleason M, Haas-Howard C, **Vinick C**, Calatroni C, Cicutto L, White M, Williams S, McGinn M, **Langton CL**, Shocks D, Mitchell H, Stempel DA. Building bridges for asthma care: reducing school absence for inner city children with health disparities. *J Allergy Clin Immunol*. 2018 Jul 25.

Szeffler SJ, **Cloutier MM**, Villarreal M, **Hollenbach JP**, Gleason M, Haas-Howard C, **Vinick C**, Calatroni C, Cicutto L, White M, Williams S, McGinn M, **Langton CL**, Shocks D, Mitchell H, Stempel DA. Building bridges for Asthma Care Program: a school-centered program connecting schools, families and community health care providers. *J Sch Nurs*. 2018 Oct.

**Hollenbach JP**, Villeareal M, **Simoneau T**, **Langton C**, Mitchell H, **Flores G**, **Cloutier MM**, Szeffler, SJ. Inaccuracy of asthma-related self-reported healthcare utilization data compared to Medicaid claims. *J Asthma*. 2018 Aug 9.

Putman MS, **Simoneau T**, Feldman HA, Haagensen A, Boyer D. Low bone density and fractures before and after pediatric lung transplantation. *Bone*. 2018 Jun; 111:129-34.

Procaskey A, White H, **Simoneau T**, Traeger N, Lahiri T, Jawdeh EGA, Kremer T, Sheils C, Meyer K, Rosenkrantz T, Krishnan S, Hartman T, Feldman H, Rhein L. The optimization of home oxygen weaning in premature infants trial: design, rationale, methods, and lessons learned. *Contemp Clin Trials*. 2018 Dec; 75:72-7.

**Cloutier MM**, Salo PM, Akinbami LJ, Cohn RD, Wilkerson JC, Diette GB, Williams S, Elward KS, Mazurek JM, Spinner JR, Mitchell TA, Zeldin DC. Clinician agreement, self-efficacy, and adherence with the *Guidelines for the Diagnosis and Management of Asthma*. *J Allergy Clin Immunol Pract*. 2018 May-Jun; 6(3):886-94.e4.

## STAFF

**Michelle Cloutier, MD, Emeritus Professor**

**Jessica Hollenbach, PhD, Co-Director, Asthma Center**

**Tregony Simoneau, MD, Co-Director, Asthma Center**

**Christine Langton, MSW, MPH, Senior Program Evaluator/Research Associate**

**Brian Lesmes, BA, Administrative Assistant/Research Intern**

**Sigrid Almeida, BS, Research Assistant**



*In 2018, the Division of Medical Informatics marked its first full year of existence. The period was characterized by significant growth – welcoming four jointly appointed staff members and celebrating new professional recognition. The division now includes three Clinical Informatics board-certified/eligible physicians. Also this year, Division Head Richelle deMayo, MD, CM, was named to the inaugural class of Fellows of the American Medical Information Association, a designation acknowledging leadership and achievement in applied informatics.*

Physicians and advanced practitioners in Biomedical Informatics diagnose, treat and coordinate the management of health-related information technology ailments and conditions with the goal of producing high quality care processes and outcomes for providers and patients. Faculty members also are engaged in “preventive health”: identifying and introducing new technology solutions that make it easier for their colleagues to get their day-to-day tasks done. This past year saw division members involved in championing their fellow clinicians’ use of phone and tablet electronic health record (EHR) applications, mobile voice recognition, and clinical photo-capture software and a “virtual health” video visit platform.

Within the division, members have developed particular interest and proficiency in patient engagement, medication safety, provider efficiency and population health, but all members of the division are engaged on a daily basis in ensuring technology enhances rather than impedes quality health care. Biomedical Informatics division members design and evaluate solutions to enhance information acquisition, assimilation and application, focusing on human factors and user interface principles that support effective decision-making by clinical care providers and patients. Highlights of recent and ongoing Biomedical Informatics-led projects include the development of novel “dose too close” clinical alert tools to reduce cross care-continuum medication-timing errors, re-engineering of sedated procedure ordering to ensure more reliable interdisciplinary information flow, an “axe the fax” drive for paperless information exchange, and creation of electronic hand-off communications tools to facilitate inpatient team-based communication.

In addition to performing direct systems configuration and data analysis/interpretation, the division’s members regard strategy, service and advocacy on behalf of their fellow colleagues as their most important mission. The division hosts an annual Connecticut Children’s Healthy Provider IT Summit that serves as a collaborative agenda-setting opportunity for the medical center’s clinicians and information technology professionals. This past year, responding to national and local

survey data regarding EHR-attributable physician burnout, the division launched a comprehensive “peer to peer” advanced training campaign for providers. The team will next helm an organization-wide initiative to optimize ambulatory specialty EHR functionality and streamline workflows.

Medical Informatics is an intrinsically multidisciplinary field; each member of the division retaining patient care responsibilities in a primary clinical specialty. Within the institution, informaticists work closely with providers from every other Department of Pediatrics academic division. Outside the walls of Connecticut Children’s, informatics team members collaborate frequently with colleagues at the University of Connecticut, Yale University, the Connecticut State Office of Health Strategy, the Connecticut Department of Public Health, and the Connecticut Hospital Association on research and policy issues including medication reconciliation and polypharmacy, opioid prescribing, and health information exchange of social determinants of health. The division’s members regularly present their scholarship at conferences and serve on committees at state, regional and national levels.

**PUBLICATIONS**

Yang Y, Ward-Charlerie S, Kashyap N, **deMayo R**, Agresta T, Green J. Analysis of medication therapy discontinuation orders in new electronic prescriptions and opportunities for implementing CancelRx. *J Am Med Inform Assoc.* 2018 Nov 1; 25(11):1516-23.

**STAFF**

**Richelle deMayo, MD, CM, Division Head**

**Christopher Grindle, MD**

**Jane Im, MD**

**Bethany Peri, MD, PhD**

**Jessica Zimmerman, MD**

**Robin Bradshaw, APRN**

**Jill Herring, APRN**

**Kimberly Kempner, APRN**



*The mission of the Division of Pediatric Cardiology is to care for and improve the cardiovascular health of newborns, children and adolescents, and to transition them into healthy adulthoods. We strive to embrace discovery, teamwork, integrity and excellence in all that we do.*

*For the second consecutive year, U.S. News & World Report ranked Connecticut Children’s Medical Center among the Best Hospitals for Pediatric Cardiology and Heart Surgery.*

**Expansion**

In 2018, Dr. Alexandra Channing, who completed an advanced fellowship in non-cardiac imaging, joined our division. Her expertise includes fetal cardiology and cardiac MRI. We also added one additional cardiac sonographer, Ms. Kelsey Bogen, to our team to accommodate increasing cardiology patient volumes. Dr. Felice Heller, working in conjunction with the Division of Neurology, re-established a program for heart disease in muscular dystrophy. Dr. Heller has been providing expert pediatric and adult congenital cardiology outreach

outpatient services in Norwich, CT, since December 2017. This is in addition to our other ambulatory pediatric clinics in Danbury, Glastonbury and Farmington. We also support fetal cardiology care in conjunction with our colleagues at Danbury Hospital. This year, Dr. Alex Golden created and chairs the new Connecticut Children’s Vascular Anomalies Committee. This committee reviews complex patients with vascular anomalies to provide coordinated multidisciplinary care.

**Interventional Cardiology and Electrophysiology: Procedural Innovations**

Dr. Frederic Bernstein serves as the director of Interventional Cardiology at Connecticut Children’s, performing all of the cardiac catheterization for the pediatric and adult congenital population.

The catheterization and electrophysiology laboratory continues to be an active member of the American College of Cardiology National Cardiovascular Data Registry IMPACT registry™, a multi-institutional collective designed to support evidence-based guidelines and review of performance benchmarks. The lab also participated in the Reducing Radiation Quality Care Initiative™, leading to drastic reductions in radiation exposure for Connecticut Children’s patients.



Dr. Bernstein continues to serve as a consultant and primary investigative researcher for a UConn-founded, Connecticut-based biomedical engineering firm. Its primary work is the development and design of new medical devices, specifically implantable stent-based prosthetic valves.

Dr. Shailendra Upadhyay, the division's interim medical director, performs state-of-the-art non-fluoroscopic catheter ablation for supraventricular tachycardia in children. Connecticut Children's is the only medical facility in the state to routinely perform this procedure without X-ray use. Fluoroscopy time for catheter ablation of arrhythmias at Connecticut Children's is way below the national average.

Dr. Upadhyay remains the only certified pediatric electrophysiologist in the state. Under his guidance, the arrhythmia services at Connecticut Children's provide the full array of cardiac rhythm management to children with heart rhythm disorders. Connecticut Children's provides a dedicated pediatric pacemaker clinic run by a pediatric electrophysiologist and a pacemaker nurse.

In addition to cardiac surgery, the division's strengths in interventional cardiology and electrophysiology have been instrumental in inclusion of our hospital in the *U.S. News & World Report* rankings.

#### Adult Congenital Heart Disease Program

Connecticut Children's provides the most comprehensive care of adults with congenital heart disease (ACHD) in the state of Connecticut. Our Connecticut Adult Congenital Heart Service (CTACH) received accreditation as a comprehensive adult congenital heart disease center by the Adult Congenital Heart Association (ACHA) in 2018. Our program is the first and only accredited ACHD program in the state of Connecticut and one of only 23 in the nation. Our ACHD program was rated excellent by *U.S. News & World Report*. The program is overseen by three providers, Drs. Felice Heller and Upadhyay, and Whitney Fairchild, APRN. Drs. Heller and Upadhyay are both board-certified adult congenital cardiologists. The outpatient clinic follows over 1,000 adults with congenital heart disease on an annual basis. It also offers comprehensive pregnancy management for patients with congenital heart disease. We work collaboratively with Hartford Hospital in care of ACHD patients and provide inpatient consultations there. We have developed specific institutional policies to provide best care to these patients.

#### Non-Invasive Imaging: Pediatric and Adult

This year marked the highest volume yet of transthoracic, transesophageal, and fetal echocardiograms performed by the echocardiography lab at Connecticut Children's main hospital and satellite locations. Sonographers expanded their performance of inpatient echocardiograms on weekends to improve the efficiency and quality of the studies, and our patient care. We continue to maintain quality initiatives, have developed

imaging protocols, and are engaged with ongoing education for sonographers and cardiology colleagues. Our echocardiography team, certified by the Intersocietal Accreditation Commission, continues our commitment to performing the highest quality echocardiograms with efficient and accurate interpretation to serve the babies, children, and adults with congenital heart disease and acquired cardiac illness in our community.

#### Non-Invasive Imaging: Fetal

Our fetal cardiology program experienced continued growth this year. We performed about 350 fetal echocardiograms in 2018, an increase of 75 percent compared to 2017. To accommodate our growth, our division has grown with the addition of a fetal cardiologist and a fetal sonographer. Our multidisciplinary fetal cardiology team includes cardiologists, nurses, specially trained sonographers, obstetricians, maternal-fetal medicine specialists, neonatologists, the palliative care team, and pediatric cardiothoracic surgeons. We provide services in Hartford on the main campus and at our satellite clinic in Farmington. We present monthly educational conferences for the regional maternal-fetal medicine specialists, and we are the primary site for teaching fetal echocardiography for the maternal-fetal medicine fellow at the University of Connecticut. We are actively working on the development of a fetal registry and on clinical care pathways that will enable us to track and optimize outcomes in our fetal patients.

#### Non-Invasive Imaging: Cardiac MRI

Cardiac magnetic resonance (CMR) imaging is an important diagnostic tool in the care of all patients with congenital and acquired heart disease. It is now a standard of care for evaluation of adults with congenital heart disease. Dr. Olga Toro-Salazar leads our program, which this year received a boost with the addition of Dr. Channing, who brings advanced training in cardiac MRI imaging. Our cardiac MRI program has grown substantially over the years providing state-of-the-art care for children and adults with congenital heart disease, and for cardio-oncology patients.

#### Non-Invasive Imaging: Cardio-Oncology Program

The Cardiology and Hematology-Oncology divisions at Connecticut Children's collaborate in maintaining a cardio-oncology program, COPE (Cardiovascular Oncology Prevention Experience). The program focuses on chemotherapy-related damage to the heart. A multidisciplinary clinical, imaging and research team has created a registry of cancer patients treated with cardio-toxic medications at Connecticut Children's. The program aims to provide uniform, evidence-based cardiac care to childhood survivors of cancer by way of research and innovations.

#### Inpatient Cardiology

The Inpatient Cardiology program continues to serve the hospital for inpatient consultations and to provide care for children with

congenital and acquired heart disease and adults with congenital heart disease. The inpatient team collaborates closely with the Critical Care team, the Pediatric Surgery service, and the Neonatal Intensive Care team to provide care of pre- and post-operative cardiac patients with special attention to standardization of care, smooth transition of care from the ICU to regular nursing floor settings, and from inpatient to outpatient settings. Several Quality Improvement measures were undertaken including the development of a board and daily rounding system for inpatient cardiology services. A cardiac nursing task force and a didactic nursing educational program have been developed and implemented. The inpatient team continues to provide education to the house staff and medical students, both on rounds and in didactic settings.

#### Education

Our division is dedicated to the medical education of future providers and medical professionals. Drs. Heller and Upadhyay provide training in congenital heart disease for adult cardiology fellows from Hartford Hospital and John Dempsey Hospital. We have created a formal one-month rotation for adult cardiology fellows with exposure to all aspects of congenital heart disease. Among all Cardiology services at Hartford Hospital and UConn Health, ours was rated the best in teaching for adult cardiology fellows. Dr. Heller serves as a content expert for the first-year medical students core curriculum. She has created a highly regarded lecture series on congenital heart disease for adult cardiology fellows.

Dr. Alicia Wang provides training in fetal cardiology for the maternal-fetal medicine fellows at the University of Connecticut. We provide subspecialty training for pediatric residents in Pediatric Cardiology. We also contribute to the training of medical students at both the University of Connecticut and the state's newest medical school, Quinnipiac University.

The School of Pediatric Cardiac Ultrasound through the Hoffman Heart and Vascular Institute of Connecticut is now in its ninth year. It is recognized by the Joint Review Committee on Education in Cardiovascular Technology (JRC-CVT) and the Commission of Accreditation of Allied Health Education Programs (CAAHEP). Connecticut Children's Echo Lab is the training site for didactic and hands-on instruction of pediatric ultrasound for one to two sonographers yearly.

Under the research mentorship of Drs. Toro-Salazar, Brooke Davey, and Upadhyay, our residents, Drs. Sarah Kollar and former resident Tam Doan, were able to complete research studies and present data at national meetings.

#### Professional Recognition

Dr. Heller has an international reputation as an expert for LMNA cardiomyopathy with patients seeking her care from outside the state of Connecticut. She was invited to participate in the Weitzman Institute Project ECHO live videoconference

on Syncope, providing didactic instruction and discussing challenging cases with providers from across the country.

The 10th Annual New England Congenital Cardiology Association Meeting took place October 13-14th at Water's Edge Resort and Spa in Westbrook, CT. Dr. Davey was the regional host. In addition to hosting, she represented Connecticut Children's as a panelist for the Case Presentation discussion. Sixty-eight congenital cardiology physicians and nurse practitioners from 14 practices across all six states in the New England region participated in the two-day meeting.

Dr. Bernstein achieved the distinction of becoming a Fellow of the Society of Cardiovascular Angiography and Interventions (SCAI), the primary professional association for pediatric and adult interventional cardiologists. He also represented Connecticut Children's during his invited professorship at the U.N. Mehta Institute of Cardiology and Research Center (which is affiliated with B.J. Medical College) in Ahmedabad, India, in February 2018.

Dr. Toro-Salazar presented "Assessment of Cardiac Injury and Toxicity from Cancer Chemotherapy" at the Multinational Association of Supportive Care in Cancer Annual Meeting held June 28-30, 2018, in Vienna, Austria.

Whitney Fairchild, APRN, was accepted into an evidence-based practice (EBP) fellowship program. She spearheaded an ongoing project involving a study to investigate and improve self-health management skills in the adult congenital heart disease population.





## Cardiology Research Program

### Immunology and Congenital Heart Disease

The multicenter collaboration for the project "T-Cell Receptor Excision Circles: A Novel Approach to Identify Immunodeficiency in Newborns with Congenital Heart Disease (CHD)" is supported by grant funding from the New England Congenital Cardiology Association (NECCA) Research Foundation. Data analysis demonstrated for the first time that newborns with CHD have lower T-cell Receptor Excision Circle (TREC) levels in comparison to 37,101 newborns in the general population. This project was presented by Dr. Davey at the American College of Cardiology 67th Annual Scientific Session in 2018 in Orlando, FL, and at the Pediatric Academic Societies 2018 Annual Meeting in Toronto, Canada.

### Fontan Working Group

The Connecticut Children's team continues to work closely with the Fontan Working Group through the New England Congenital Cardiology Association. Dr. Davey presented results from a multicenter survey, "Surveillance and Screening of Fontan Patients," at the Pediatric Academic Societies Annual Meeting in Toronto, Canada.

### Cardio-Oncology Research

Anthracycline-induced cardiomyopathy (AIC) presents a major long-term issue in survivors of childhood cancers treated with anthracycline group medications. Dr. Toro-Salazar and Milena Furtado from the Jackson Laboratories in Farmington, CT, are leading a multidisciplinary team to ensure advancement of our understanding of molecular and cellular mechanisms underlying the development of AIC severe adverse sequelae. Our preliminary data is quite encouraging, and results were published in the *American Journal of Physiology*, and *Cardio-oncology*.

### Active Grants

Hartford Foundation for Public Giving (Toro-Salazar, PI) – 1/1/2016-12/31/2018. Establishing Cardiac Magnetic Resonance Imaging as the Standard of Care for Childhood Cancer Patients Exposed to Anthracycline Therapy.

Maximilian E. & Marion O. Hoffman Foundation – 1/1/2015–1/1/2018. The Role of Aerobic Exercise to Modulate Cardiotoxicity in Long-Term Cancer Survivors.

UConn Institute for Systems Genomics Affinity Research Collaborative (ARC) 12/1/2013–12/1/2018. Use of Diversity Outbred Mice to Study Cardiotoxicity of Chemotherapeutic Agents.

St. Baldrick's Foundation. Program: Supportive Care Research Grant (Toro-Salazar, Co-PI) – 06/2017-2018. A Validity Study of Integrated Care Delivery Guidelines for AIC.

## PUBLICATIONS

**Toro-Salazar OH**, Lee JH, Zellars KN, Perreault PE, Mason KC, Wang Z, Hor KN, Gillan E, Zeiss CJ, Gatti DM, **Davey BT**, Kutty S, Liang BT, Spinale FS. Use of integrated imaging and serum biomarker profiles to identify subclinical dysfunction in pediatric cancer patients treated with anthracyclines. *Cardio-Oncology*. 2018;4. pii:4. <https://doi.org/10.1186/s40959-018-0030-5>.

Oatmen KE, **Toro-Salazar OH**, Hauser K, Zellars KN, Mason KC, Hor K, Gillan E, Zeiss CJ, Gatti DM, Spinale FG. Identification of a novel microRNA profile in pediatric cancer patients treated with anthracycline chemotherapy. *Am J Physiol Heart Circ Physiol*. 2018 Aug 24. <https://doi.org/10.1152/ajpheart.00252.2018>.

Sulejmani F, Pokutta-Paskaleva A, **Salazar O**, Karimi M, Sun W. Mechanical and structural analysis of the pulmonary valve in congenital heart defects: a presentation of two case studies. *J Mech Behav Biomed Mater*. 2018; 89:9-12.

## STAFF

**MacDara Tynan, MD, Interim Division Head**

**Shailendra Upadhyay, MD, CEPS, FHRS, Interim Medical Director**

**Frederic Bernstein, DO, FACC, FSCAI**

**Leon Chameides, MD, Professor Emeritus**

**Alexandra Channing, MD**

**Brooke Davey, MD**

**Alex Golden, MD, MMM**

**Felice Heller, MD**

**Seth Lapuk, MD, FAAP, FACC**

**Olga Toro-Salazar, MD**

**Alicia Wang, MD**

**Whitney Fairchild, APRN**

**Lisa McCabe, APRN**

*The Pediatric Cardiothoracic Surgery service provides world-class surgical care and support to the children and adults of Connecticut born with congenital heart disease. In 2018, U.S. News & World Report ranked Connecticut Children's Medical Center among the Best Hospitals for Pediatric Cardiology and Heart Surgery.*

Nationally renowned congenital heart surgeon Dr. Dennis Mello joined the staff of Connecticut Children's as clinical director of cardiovascular surgery in 2018. Dr. Mello has performed numerous complex congenital heart surgeries since his arrival including a Norwood operation for hypoplastic left heart syndrome. His operative results are excellent. Dr. Neal Devejian, a congenital heart surgeon, and Dr. Kenneth Warner, an experienced adult congenital heart surgeon, have been credentialed for congenital heart surgeries at Connecticut Children's. Both Drs. Devejian and Warner operate alongside Dr. Mello, further strengthening our congenital heart surgery program and regional collaborations.

Our surgical data and operative outcomes are periodically submitted to the Society of Thoracic Surgeons (STS) Congenital Cardiac Surgery Database ([www.sts.org](http://www.sts.org)). The STS Database includes more than 94 percent of the congenital cardiac surgery programs in North America and helps establish outcome and quality benchmarks. We continue to rank very well with these

objective benchmarks and, in 2017 and 2018, we were ranked among best U.S. hospitals for heart surgery. Our results are included and updated on the STS website.

The Pediatric Cardiothoracic Surgery service strives for discovery, teamwork, integrity and excellence in cardiac surgical care. Cardiothoracic Surgery, Pediatric Cardiac Anesthesia, the Pediatric Intensive Care Unit (PICU) and Pediatric Cardiology have worked together in a strong collaboration to provide a uniform standard of care to patients with congenital heart disease who are seeking surgery.

## Education

The service provides ongoing education and support for cardiac nurses in the PICU.

## STAFF

**Dennis Mello, MD, Clinical Director, Cardiothoracic Surgery**

**Neal Devejian, MD, Congenital Heart Surgeon**  
**Kenneth Warner, MD, Adult Congenital Heart Surgeon**

**Jill Sullivan, MS, PA-C**





*The Center for Airway, Voice, and Swallowing, also known as the Aerodigestive Team, was started in 2011 and was designated in 2017 as a surgical division within Otolaryngology. The mission of the center is to provide state-of-the-art care for children with complex disorders affecting airway, breathing, feeding, swallowing, and growth.*

The center is truly unique in that it is multidisciplinary, consisting of pediatric specialists from Otolaryngology, Pulmonology, Gastroenterology, Speech and Language (Swallow) Pathology, and General Surgery. Appointments with our team include a coordinated visit with pertinent specialists and concurrent diagnostic tests or interventions. For many patients, coordinated surgical endoscopy (also called a “triple scope”) is the next step in evaluation and treatment.

Our synchronized approach offers many advantages for patients and families, including fewer doctor visits and missed days of school/work; fewer exposures to anesthesia; less time to effective treatment; and, by combining surgical procedures and minimizing off-target testing, families generally see fewer out-of-pocket medical costs. The ultimate advantage is that our collaboration yields more comprehensive, sophisticated, and effective treatment for this vulnerable population.

Our Center for Airway, Voice, and Swallowing continued to grow in 2018. We offer multiple clinics with facilities in Farmington, Glastonbury, and Hartford. Full Aerodigestive Team clinics are held three times monthly (Hartford, Farmington). Focused specialty clinics are also offered: Airway clinics are held twice weekly (Hartford), voice clinics are held twice monthly (Glastonbury, Farmington), and swallow clinics are held twice monthly (Hartford, Farmington). Our team operates together twice monthly, a number that has doubled since last year to keep up with demand. Our faculty increased in 2018 as well. We added pediatric gastroenterologists Drs. Victoria Grossi and Peter Townsend to our team. We are especially pleased to have added a new position to our center: Barbara Mulholland, RN, is our new aerodigestive nurse.

Nationally, the team was honored again to have been selected to lead teaching sessions at the 6th Annual Contemporary Management of Aerodigestive Diseases in Children conference. This year, we doubled our presence with division head Dr. Nicole Murray and Rebecca Strong, APRN, both teaching sessions at the conference.

Our team members also enhanced or gained international reputations this year: Dr. Katherine Kavanagh continues to teach sophisticated pediatric airway procedures in international sessions, teaching this year at the European Society of Pediatric Otolaryngology in Stockholm, Sweden. Dr. Murray taught the pediatric component of the first United States session of the international course “The Altered Airway,” which is sponsored by the Global Tracheostomy Collaborative. Our swallow experts Kamie Chapman, Marni Simon and Virginia Van Epps taught a webinar for the International Dysphagia Diet Standardization Initiative.

**GRANTS**

Simoneau T. Cigna Foundation World of Difference Grant Creating an Asthma Network: Improving Asthma Management for Children in the North Hartford Promise Zone.

Simoneau T. NIAID, U01 AI 126614. PI: Wanda Phipatanakul. Controlling and Preventing Asthma Progression and Severity in Kids (CASK). Site-PI for multi-center study.

Simoneau T. Robert Leet Patterson and Clara Guthrie Patterson Trust Mentored Research Award: “Identifying Biomarkers of Allergic Asthma: What Can the Long Non-Coding RNA Tell Us?”

**PUBLICATIONS**

**Kavanagh KR**, Spiro J. Faculty wellness: educator burnout among otolaryngology graduate medical educators. *Otolaryngol Head Neck Surg.* 2018; 158(6):991-4.

Schwartz MA, **Kavanagh KR**, Frampton SJ, Bruce IA, Valdez TA. Using simulators to teach pediatric airway procedures in an international setting. *Int J Pediatr Otolaryngol.* 2018; 104:178-81.

**Murray N**, Valdez TA, Hughes AL, **Kavanagh KR**. Teaching a tracheotomy handoff tool to pediatric first responders. *Int J Pediatr Otolaryngol.* 2018; 114:120-3.

Hollenbach J, Villarreal M, **Simoneau T**, Langton C, Mitchell H, Flores G, Cloutier M, Szeffler S. Inaccuracy of asthma-related self-reported health-care utilization data compared to Medicaid claims. *J Asthma.* Epub 2018 Jul 15.

Procaskey A, White H, **Simoneau T**, Traeger N, Lahiri T, Abu Jawdeh E, Kremer T, Sheils C, Meyer K, Rosenkrantz T, Sankaran K, Hartman T, Feldman H, Rhein L. The optimization of home oxygen weaning in premature infants trial: design, rationale, methods and lessons learned. *Contemp Clin Trials.* Epub 2018 Aug 11.



**Zeisler B**, Lerer T, Hyams J. Utilization and clinical outcome following 5-aminosalicylate therapy for Crohn’s disease in children. *J Gastroenterol Hepatol Res.* 2018; 3:016-23.

**STAFF**

**Nicole Murray, MD, Director, Aerodigestive Team Otolaryngology – Head and Neck Surgery**

**Victoria Grossi, DO**  
*Pediatric Gastroenterology*

**Katherine Kavanagh, MD**  
*Pediatric Otolaryngology*

**Craig Lapin, MD**  
*Pediatric Pulmonology*

**Anne McLaughlin, MD**  
*Pediatric Pulmonology*

**Christine Rader, MD**  
*Pediatric Surgery*

**Tregony Simoneau, MD**  
*Pediatric Pulmonology*

**Peter Townsend, MD**  
*Pediatric Gastroenterology*

**Bella Zeisler, MD**  
*Pediatric Gastroenterology*

**Sara Burnham, MA, CCC-SLP**  
*Speech/Language Pathology*

**Kamie Chapman, MS, CCC-SLP**  
*Speech/Language Pathology*

**Kathryn Fields, MS, CCC-SLP**  
*Speech/Language Pathology*

**Kelly Mabry, PhD, CCC-SLP**  
*Speech/Language Pathology*

**Anna Maria Mennella, LMSW**  
*Family Support Clinician*

**Barbara Mulholland, RN, BSN, CPN, CNRN**  
*Nursing Coordinator*

**Marni Simon, CCC-SLP, BCS-S**  
*Speech/Language Pathology*

**Rebecca Strong, CPNP, APRN**  
*Clinical Coordinator*

**Virginia M. VanEpps, M.Ed., CCC-SLP, CLC**  
*Clinical Manager, Speech-Language Pathology*

**Claribel Vega, MA**  
*Administrative Coordinator*

**Virginia Weill, MEd, CCC-SLP**  
*Speech/Language Pathology*





*The Center for Behavioral Health (CBH) focuses on developmental and clinical psychology research, especially as it relates to child and adolescent health and pediatric care. The research conducted by CBH investigators is interdisciplinary, collaborative, and emphasizes the psychological and physical health of children, adolescents, and their families. CBH research takes place in settings such as Connecticut Children's medical clinics, schools, homes, and community organizations.*

In 2018, the Center for Behavioral Health welcomed research assistant Tessa Fagle, BA.

The year was an extremely busy one for the CBH. Our work yielded 22 presentations at national conferences including the Society for Research on Adolescence, the National Council on Family Relations, the Society of Pediatric Psychology, the Research Society on Marijuana, the Pediatric Pain Management: State of the Art and Science Conference, the American Society for Pain Management Nursing, the Society of Pediatric Psychology, the Association for Psychological Science, and the American Psychological Association annual and biennial meetings. As a group, we published 20 manuscripts, many in top-tier journals. Our research also was featured in outlets such as NBC CT News. In addition, Kelly Nedorostek, a University of Connecticut medical student, won the Connecticut Academy of Family Practice Award for research she conducted with us at the CBH. On another high note in 2018, Dr. Jessica Schulz's dissertation, which was supervised by division head Dr. Christine

McCauley Ohannessian, was based on the CBH's Adolescent Adjustment Project, and it was included in ProQuest's list of the 25 most-accessed/downloaded dissertations.

The CBH has a number of active research projects. Projects led by Dr. Ohannessian include the Adolescent Adjustment Project (AAP; adolescentadjustmentproject.org), the BALANCE project (balanceresearchproject.org), the PANDA project (Predictors of Adolescent Depression and Anxiety; pandaresearchproject.org), and the REACH Project on emerging adults (reachresearchproject.org). Data from the AAP and the REACH projects have yielded 12 published papers this past year. Our NSF-funded BALANCE project also has been busy. The BALANCE project is a partnership between Connecticut Children's Medical Center, the University of Maryland, and Georgia State University. The goal of BALANCE is to examine the influence that parental work and family conflict have on one another and how they interact to influence adolescent behavioral health. Survey data collection has been completed for 100 families, and laboratory data collection now is ongoing. This past year we published two papers based on the BALANCE project data. Our PANDA project, funded by the Alvord Foundation, has been quite active as well. The primary aim of the PANDA project is to examine predictors of gender differences in depression and anxiety during early adolescence. We have collected four waves of data from approximately 1,500 middle school students in Connecticut and Massachusetts. We are in the process of collecting a fifth wave of PANDA data. In 2018, we also published our first PANDA paper. Numerous students have been involved in these CBH research projects, including 40 UConn undergraduate students. This past year, Dr. Ohannessian collaborated as a co-investigator with Dr. Yifrah Kaminer from the Psychiatry Department at

UConn Health, and investigators from Duke University on an NIH-funded project focusing on treatments for adolescents with substance use disorders and depression. In addition, Dr. Ohannessian collaborated with Dr. Caitlin Elsaesser from the University of Connecticut School of Social Work and Dr. Desmond Patton from the Columbia University School of Social Work on a research project focusing on social media use and aggressive behavior in youth living in violent neighborhoods.

During 2018, Dr. Jessica Guite and her research team continued their advance clinical research capacity at Connecticut Children's with a focus on intervention development for youth with chronic pain/symptoms and their parents, and research related to effective self-management of these challenging problems. Dr. Guite's collaborations with colleagues at Connecticut Children's and external partners generated publications focusing on various aspects of chronic pediatric pain management in the context of interdisciplinary care. Dr. Guite and her co-principal investigator, Dr. Beth S. Russell of the UConn Department of Human Development & Family Studies, published and presented symposia on their project, "Parents as Coping Coaches (PaCC)." It is a UConn InCHIP/Connecticut Children's Dual-PI Seed Grant-supported brief, parent-focused group intervention to improve parenting distress tolerance and caregiver burden (primary aims) and functional outcomes for adolescents with chronic pain syndromes (secondary aim) while pursuing funding to further develop this line of research. Dr. Guite was delighted to also welcome the first Pediatric Pain Psychology postdoctoral fellow as a member of her research team. It's a position that has provided an important foundation for further behavioral health program development, academic productivity, and interdisciplinary clinical research expansion at Connecticut Children's. Her role as site PI at Connecticut Children's generated effective team-science collaboration and a very successful first year of the NIH-funded Phase III multisite clinical trial, "Multi-site randomized clinical trial of FIT Teens for juvenile fibromyalgia (<https://clinicaltrials.gov/ct2/show/NCT03268421>)." Originating at Cincinnati Children's Hospital Medical Center (primary site), this five-year, seven-site project will test whether FIT Teens, an 8-week group intervention combining coping skills (cognitive behavioral therapy/CBT) and neuromuscular exercises to improve strength, fitness and body mechanics, is more effective at reducing disability compared to CBT or Graded Aerobic Exercise (GAE) alone at three months, and if treatment effects are maintained over 12 months. Participation in this rigorous, prospective, randomized controlled trial further provides opportunities for ancillary research protocol development including projects examining pain-related readiness to change as a potential mechanism of action in relation to intervention effects over time.

During 2018, the Center for Behavioral Health collaborated with many external partners including the University of Alabama, Columbia University, Illinois State University, the University of California Berkeley, the University of Connecticut at Storrs,

UConn Health, UConn School of Social Work, the University of Delaware, the University of Maryland, the University of North Carolina, Georgia State University, the State University of New York, Cincinnati Children's Hospital Medical Center/University of Cincinnati, Children's Hospital of Philadelphia/University of Pennsylvania, Children's Hospital of Wisconsin/Medical College of Wisconsin, Hartford Hospital/the Institute of Living, and the Alvord Foundation.



## PUBLICATIONS

Finan LJ, **Ohannessian CM**, Gordon MS. Trajectories of depressive symptoms from adolescence to emerging adulthood: the influence of parents, peers, and siblings. *Dev Psychol.* 2018;54(8):1555-67.

Finan LJ, **Simpson E**, Schulz J, **Ohannessian CM**. Parental problem drinking and emerging adult problem behavior: the moderating role of parental support. *J Child Fam Stud.* 2018;27(4):1175-85.

Flannery KM, **Vannucci A**, **Ohannessian CM**. Using time-varying effect modeling to examine age-varying gender differences in coping throughout adolescence and emerging adulthood. *J Adolesc Health.* 2018; 62:S27-S34.

**Guite JW**, Russell BS, Pantaleao A, Heller AT, Donohue E, Galica V, Zempsky WT, **Ohannessian CM**. Parents as coping coaches for adolescents with chronic pain: a single-arm group-based pilot intervention promoting caregiver self-regulation. *Clin Pract Pediatr Psychol.* 2018;6(3):223-37.



**Guite JW**, Sherry DD, Jarvis EW, Lewen MO, Khan S, Kraemer FW. Medication use among pediatric patients with chronic musculoskeletal pain syndromes at initial pain clinic evaluation. *Pain Manag.* 2018;8(1):15-25.

Kaminer Y, **Ohannessian CM**, McKay J, Burke R, Flannery KM. Goal commitment predicts treatment outcome for adolescents with alcohol use disorder. *Addict Behav.* 2018;76:122-28.

**Ohannessian CM**. Adolescent-parent relationships. In: Bornstein M, editor. *Encyclopedia of lifespan human development*. Thousand Oaks, CA: Sage Publications; 2018. p. 41-2.

**Ohannessian CM**. Twins. In: Bornstein M, editor. *Encyclopedia of lifespan human development*. Thousand Oaks, CA: Sage Publications; 2018. p. 2276-8.

**Ohannessian CM**. Video game play and anxiety during adolescence: the moderating effects of gender and social context. *J Affect Disord.* 2018;226:216-9.

**Ohannessian CM**, Schulz J. Technology use. In: Bornstein M, editor. *Encyclopedia of lifespan human development*. Thousand Oaks, CA: Sage Publications; 2018. p. 2210-1.

**Ohannessian CM, Vannucci A**. Adolescent psychological functioning and membership in latent adolescent-parent communication dual trajectory classes. *J Res Adolesc.* 2018 Aug 17. doi: 10.1111/jora.12442. [Epub ahead of print]

**Ohannessian CM, Vannucci A**. Technology use typologies and psychological adjustment during adolescence. *Youth Soc.* 2018 Jun 27. doi: 10.1177/0044118X18785089. [Epub ahead of print]

**Ohannessian CM, Vannucci A**, Lincoln CR, Flannery KM, Trinh A. Self-competence and depressive symptoms in middle-late adolescence: disentangling the direction of effect. *J Res Adolesc.* 2018 Jun 13. doi: 10.1111/jora.12412. [Epub ahead of print]

Pantaleo A, DiPlacido J, **Guite JW**, Zempsky WT. Caregiver factors related to emergency department utilization for youth with sickle cell disease. *Child Health Care.* 2018 Apr 4. doi: 10.1080/02739615.2018.1454838. [Epub ahead of print]

**Simpson E, Vannucci A, Ohannessian CM**. Family functioning and adolescent internalizing symptoms: a latent profile analysis. *J Adolesc.* 2018;64:136-45.

Stojek M, Shank LM, **Vannucci A**, Bongiorno DM, Nelson EE, Waters, AJ, et al. A systematic review of attentional biases in disorders involving binge eating. *Appetite.* 2018;123(1):367-89.

**Vannucci A**, Flannery KM, **Ohannessian CM**. Age-varying associations between coping and depressive symptoms throughout adolescence and emerging adulthood. *Dev Psychopathol.* 2018;30(2):665-81.

**Vannucci A, Ohannessian CM**. Psychometric properties of the brief loss of control over eating scale (LOCES-B) in early adolescents. *Int J Eat Disord.* 2018;51(5):459-64.

**Vannucci A, Ohannessian CM**, Flannery K, De Los Reyes A, Liu S. Associations between friend conflict and affective states in the daily lives of adolescents. *J Adolesc.* 2018;65:155-66.

**Vannucci A, Ohannessian CM**, Gagnon S. Use of multiple social media platforms in relation to psychological functioning in emerging adults. *Emerg Adulthood.* 2018 Jun 20. doi: 10.1177/2167696818782309. [Epub ahead of print]

De Los Reyes A, **Ohannessian CM**, Racz S. Discrepancies among adolescent and parent reports about family relationships. *Child Dev Perspect.* 2018. <https://doi.org/10.1111/cdep.12306>.

#### STAFF

**Christine McCauley Ohannessian, PhD, Director,**  
**Center for Behavioral Health**

**Sonja Gagnon, BS**

**Jessica Guite, PhD**

**Tessa Fagle, BA**

**Melanie Klink, BA**

**Courtney Lincoln, MA**

**Emily Simpson, MA**

**Anna Vannucci, MS**



*The Center for Global Health (CGH) improves the health of children who live in resource-limited settings by supporting the collaborative, sustainable capacity-building activities of our learners, staff and faculty. The CGH creates a culture that reinforces our status as world citizens and the recognition that we have the ability, opportunity and responsibility to improve the health of children not just locally but throughout the world, which also allows the hospital community to fully share their gifts.*

This mission is accomplished through educational activities such as the **Global Healthcare Conference**, the **Global Health Film Festival**, and the educational and clinical work performed by our team on-location in resource-limited settings. This year, in the clinical realm, major accomplishments of the CGH included over four capacity-building missions to Haiti, including a PALS teaching course in collaboration with Konbit Santé at Justinien University Hospital in Cap-Haitien, Haiti, and a trip to assess the clinical status and capacity of the Faith Mulira Health Care Center in Uganda, Africa, in collaboration with the Masooli Project. Additionally, we continued our collaboration with other activities in Haiti, India, and at the local level in Hartford, CT.

The CGH has continued its growth from the original hospital-based effort to bring together like-minded individuals who are dedicated to collaboratively exploring and solving complex health challenges in resource-limited settings. The program continues to be led by Adam Silverman, MD, as director, and Karen Damon Callahan, MHS, RN, CPN, as associate director, with support from the Executive Management Team and Physician-in-Chief Juan C. Salazar, MD, MPH, FAAP. The CGH benefits Connecticut Children's by continuing to provide opportunities for learners, staff and faculty to participate in philanthropic global health activities, in addition to increasing access to high-quality care for children throughout the world. These efforts have been shown to improve job satisfaction and institutional loyalty, and reduce staff turnover. The CGH identifies methods for lowering barriers to participation in global health-care activities as well as training the next generation of global health-care providers and leaders.

During 2018, the CGH continued its mission of education and culture-building by providing a venue for sharing efforts of health-care providers from Connecticut Children's, the University of Connecticut School of Medicine, and our other institutional health-care partners during the sixth annual **Global Healthcare Conference** and the fifth annual **Global Health Film Festival**. Specifically, the 2018 conference included speakers from within Connecticut Children's as well as outside institutions in order to highlight the activities of volunteers



who participated in a variety of activities in locations such as Haiti, Iraq, India, Namibia, Nicaragua, Puerto Rico, Rwanda, and locally in Hartford and New Haven, CT. Additionally, the CGH expanded its efforts to educate and bring awareness to health care providers regarding global health successes and dilemmas by presenting at nursing grand rounds, and accepting invitations to speak in a Traveling Grand Rounds program hosted by various hospital locations around the state of Connecticut during the fiscal year 2019.

The foundation of these capacity-building activities are collaborations, partnerships and sustainable volunteering opportunities with several organizations including:

- Justinien University Hospital as volunteers with Konbit Santé in Cap-Haitien, Haiti
- Hôpital Bernard Mevs as volunteers with Project Medishare in Port-au-Prince, Haiti
- St. Damien Pediatric Hospital as members of the St. Damien Collaborative in Port-au-Prince, Haiti
- Hospital Sacré Coeur Pediatric Diabetes Program as volunteers with CRUDEM in Milot, Haiti
- NICE Foundation Cool the Kids program in Hyderabad, India
- The Faith Mulira Healthcare Centre as volunteers with the Masooli Project in Masooli, Uganda

## PUBLICATIONS

Baumann L, Clinton H, Berntsson R, Williams SS, Rovella JC, Shapiro D, Thaker S, Borrup K, Lapidus G, **Campbell BT**. Suicide, guns, and buyback programs: an epidemiologic analysis of firearm-related deaths in Connecticut. *J Trauma Acute Care Surg*. 2017 Dec; 83(6):1195-9.

Puls MW, Kuhls DA, **Campbell BT**, Burke PA, Michelassi F, Stewart RM. Survey of the American College of Surgeons Board of Governors on firearm injury prevention: consensus and opportunities. *Bull Am Coll Surg*. 2017 October; 102(10):30-6.

Stewart RM, Kuhls DA, **Campbell BT**, Letton RW, Burke PA, Dicker RA, Gaines BA. The COT's consensus-based approach to firearm injury: an introduction. *Bull Am Coll Surg*. 2017 Oct; 102(10):13-9.

Naik-Mathuria BJ, Rosenfeld EH, Gosain A, Burd R, Falcone RA Jr, Thakkar R, Gaines B, Mooney D, Escobar M, Jafri M, Stallion A, Klinkner DB, Russell R, **Campbell B**, et al. Proposed clinical pathway for nonoperative management of high-grade pediatric pancreatic injuries based on a multicenter analysis: a pediatric trauma society collaborative. *J Trauma Acute Care Surg*. 2017 Oct; 83(4):589-96.

**Held M**, Kotler H, Sneller H, Sullivan C. Lemierre's syndrome presenting as multifocal pyomyositis in a young child. *Pediatr Infect Dis J*. 2018 May; 37(5):e142-e144.

Arora G, Esmaili E, Pitt M, Green A, Umphrey L, Butteris S, St. Clair N, Batra M, **O'Callahan C**, on behalf of the American Board of Pediatrics Global Health Task Force. Pediatricians and global health: opportunities and considerations for meaningful engagement. *Pediatrics*. 2018 Jul; e20172964. doi: 10.1542/peds.2017-2964.

## OUR TEAM

**Adam Silverman, MD, FAAP** – Director, Connecticut Children's Center for Global Health; Emergency Medicine and Critical Care physician

**Karen Damon Callahan, BSA, BSN, MHS, RN, CPN - Associate Director, Connecticut Children's Center for Global Health**, Nurse Manager, Neonatal Intensive Care Unit

**Brendan Campbell, MD, MPH, FACS** – Director of Trauma, Pediatric Surgical Quality and Safety Officer

**Nancy Dunbar, MD, MPH, FAAP** – Endocrinologist

**Melissa Held, MD** – Infectious Diseases & Immunology Physician

**Victor Herson, MD** – Neonatologist

**Naveed Hussain, MD** – Neonatologist

**Cliff O'Callahan, MD, PhD, FAAP** – Pediatric Faculty and Director of Nurseries, Middlesex Hospital; Associate Professor, Pediatrics, University of Connecticut School of Medicine; Assistant Professor, Family Medicine, Frank H. Netter, MD, School of Medicine, Quinnipiac University

**Andrea Orsey, MD** – Director, Cancer Supportive Care Program

**Juan C. Salazar, MD, MPH, FAAP** – Physician-in-Chief and Executive Vice President, Academic Affairs, Connecticut Children's

**Kristin Welch, MD** – Emergency Medicine Physician

**Stephen Mahier, BSN, RN** – Pediatric Intensive Care Unit (PICU) Nurse

*The Division of Child Abuse Pediatrics provides clinical evaluation services through the Suspected Child Abuse and Neglect (SCAN) program at Connecticut Children's Medical Center. Consults are provided on an inpatient and outpatient basis at the Hartford campus of Connecticut Children's, and they include comprehensive expert medical evaluation and psychosocial assessment for children who may have experienced maltreatment. Program staff members offer support to caregivers throughout the evaluation process. We seek to collaborate with multidisciplinary partners in the service of the child and family, and strive to improve community response to child maltreatment through education, research, prevention and advocacy.*

Beyond clinical work, 2018 activities of division staff included the following:

- Teaching medical students, residents and fellows with didactics and block rotations
- Teaching statewide multidisciplinary partners, including child protective service workers, members of law enforcement, and attorneys
- Participation in five regional community multidisciplinary teams: Hartford/MDT 14, Central Connecticut New Britain/Bristol, East Central MDT, North Central MDT, and Tolland MDT
- Provision of regular expert testimony in Connecticut courts

- Participation in statewide initiatives focused on child abuse prevention, human trafficking, domestic violence, and abusive head trauma
- Provision of national training to attorneys on medical evaluation of abuse and neglect
- Participation in research
- Participation in quality improvement initiatives
- Provision of national medical peer review to other medical providers
- Service on national committees for the American Academy of Pediatrics Section on Child Abuse and Neglect and the Ray E. Helfer Society

## STAFF

### Medical

**Nina Livingston, MD, Division Head**

**Rebecca Moles, MD**

**Audrey Courtney, APRN**

**Sarah Dean, APRN**

### Family Advocacy/Social Work

**Ashley Bolella, LCSW**

**Alexandra Derbacher, LMSW**

### Administrative

**Wanda Vasquez, CCSG Manager**

**Anabela Coyne, Program Coordinator**





*The Division of Child and Adolescent Psychiatry remains a highly vibrant resource within the Department of Pediatrics at Connecticut Children's Medical Center. In 2018, we expanded our division to include two additional child and adolescent psychiatrists to serve as consultants to the behavioral health emergency services within the Pediatric Emergency Department and to the inpatient consultation-liaison team, and two additional physicians to our inpatient service at the Institute of Living (IOL). We are actively recruiting new physicians as the demand for child psychiatry services, especially for future collaboration efforts with Connecticut Children's, continues to grow. In addition, our team at Connecticut Children's has continued to partner with the Inpatient Management Team (IMT) to develop clinical pathways for our most complicated patients in order to provide effective collaborative care models based on extensive research of evidence-based treatment and national consensus.*

At Connecticut Children's, the division's services include: a consultation/liaison service that provides inpatient evaluations on any patient who is presenting with behavioral health concerns that may indicate co-occurring psychiatric and medical conditions; and emergency psychiatric assessment, triage and disposition services within the Connecticut Children's Emergency Department. At the IOL, clinical services include: individual, group, and family therapies; pharmacotherapy; and diagnostic evaluations. These services are provided through: inpatient units for children and adolescents; the Child and Adolescent Rapid Emergency Services (C.A.R.E.S) unit, a very short-term setting interfacing directly with Connecticut Children's Emergency Department that focuses on the assessment, stabilization, and disposition of children and adolescents in acute behavioral crisis; the Grace Webb School, a therapeutic educational setting for children and adolescents with co-existing psychiatric and learning difficulties; an outpatient child and adolescent clinic; an Extended Day Treatment Program for older school-aged children; and a partial hospital program for children and adolescents. The adolescent program has a specialized track for early onset psychotic disorders.

In addition, on the campus of the IOL, we continue to serve as one of the hubs for the ACCESS-Mental Health CT program, a collaborative educational, consultation and assessment program between primary care providers and child and adolescent psychiatrists providing more than 1,000 phone consults to primary

care physicians (PCPs) yearly, and 2,200 care coordination activities since the program started in June of 2014. Under the leadership of Dr. Lisa Namerow as medical director, our team has consistently obtained excellent ratings on all hub activities from our PCPs.

On the campus of Connecticut Children's, we continue to work closely with the Inpatient Management Team (IMT), developing collaborative care pathways. We recently completed a delirium pathway along with our hospitalist colleagues with input from Neurology, Rheumatology, intensivists and ED physicians, all of whom serve as potential providers and stakeholders in the care of patients with this condition. This has required a full hospital-wide shift in culture and education because it requires both a screening/prevention arm and a management arm. Although many pediatric hospitals have a delirium clinical pathway for their ICUs, we will be among the first to do hospital-wide screening. Working in collaboration with Dr. Catherine Wiley, division head of General Pediatrics and medical director of the Primary Care Center, and Dr. Karen Rubin, director of the Office of Innovation in Clinical Care Delivery, we are near completion of an outpatient collaborative care pathway for the treatment of anxiety and depression within primary care. Once the pathway is completed, we will focus on education and dissemination of the tool. We will also determine outcome measures to support the efficacy of standardizing treatment approaches especially in patients who require collaboration between mental health providers and medical providers.

Connecticut Children's and the IOL remain highly active teaching sites for many trainees: child and adolescent psychiatry fellows; general psychiatry residents; psychology interns; pediatric residents and medical students; as well as a post-doctoral fellow who joins our consultation-liaison service for 12 months. In 2018, we had over 50 learners assigned to one of our clinical sites. They included pediatric residents, who are now rotating through our adolescent service as part of their adolescent medicine training in addition to doing electives in child and adolescent psychiatry on our outpatient and consult services.

In the research area, Dr. Namerow and her colleagues from the IOL, Dr. Gualberto Ruano and Michael Stevens, PhD, completed their three-year project addressing the role of pharmacogenomics in the treatment of pediatric depression. They presented a poster on the study's results at the American Academy of Child and Adolescent Psychiatry annual meeting in October. In addition, Michael Stevens, PhD, and Michal Assaf, MD, of the Olin Neuropsychiatry Research Center on the campus of the IOL, remain active in the area of fMRI research in mental health conditions such as ADHD, autism, and mood disorders.

Dr. Assaf presented three abstracts recently at the annual meeting of the Society of Biological Psychiatry. Our clinical trials program, which includes pediatric psychopharmacology research, is now under the leadership of Dr. Mirela Loftus and continues to have active and ongoing projects.

While our division is relatively modest in size compared to those at other hospitals, we are among the most active in terms of presentations on topics that integrate the work of pediatrics and child psychiatry. This year, we were honored to have been selected to present on four diverse topics at the American Academy of Child and Adolescent Psychiatry (AACAP) annual meeting in Seattle, WA, in October 2018. They were homicide risk assessments, pharmacogenomics, autoimmune encephalopathy, and integration of clinical pathways in pediatrics (which also highlighted the work of Drs. Ilana Waynik and Anand Sekaran from the division of Hospital Medicine). In addition, Drs. Catherine Sullivan (IMT), Emily Kutner (pediatric psychology), and Namerow, presented an abstract on the outcome impact of our MUPS pathway at the American Academy of Pediatrics annual conference in November 2018.

## PUBLICATIONS

**Assaf M**, Rabany L, Zertuche L, Bragdon L, Tolin D, Goethe J, Diefenbach G. Neural functional architecture and modulation during decision making under uncertainty in individuals with generalized anxiety disorder. *Brain Behav.* 2018; e01015. doi: 10.1002/brb3.1015.

**Malik S**, Walker SA, Malik S, **Namerow L**. Pharmacogenomics in the treatment of child and adolescent psychiatric disorders. In: Hodes M, Gau S, De Vries, editors. *Understanding uniqueness and diversity in child and adolescent mental health.* Elsevier Academic Press. 2018 June. p. 239-58.

Boedhoe PSW, Schmaal L, Abe Y, Alonso P, Ameis SH, Anticevic A, (**Stevens MC**, 61/73). Cortical abnormalities associated with pediatric and adult obsessive-compulsive disorder: findings from the ENIGMA Obsessive-Compulsive Disorder Working Group. *Am J Psychiatry.* 2018;175(5):453-62.

**Stevens MC**, Pearlson GD, Calhoun VD, Bessette KL. Functional neuroimaging evidence for distinct neurobiological pathways in attention-deficit/hyperactivity disorder. *Biol Psychiatry Cogn Neurosci Neuroimaging.* 2018;3(8):675-85. PMID: PMC6089229.

Tolin DF, Hallion LS, Wootton BM, Levy HC, Billingsley AL, Das A, Katz BW, **Stevens MC**. Subjective cognitive function in hoarding disorder. *Psychiatry Res.* 2018;265: 215-20.



## STAFF

**Robert Sahl, MD, Division Head**

**Ben Anderson, MD**

**Michal Assaf, MD**

**Sudeshna Basu, MD**

**Eric D. Cohen, MD**

**Rosemary Coratola, PsyD, LMFT**

**Mirjana Domakonda, MD**

**Jensi George, MD**

**Julie Goslee, MD**

**Sheena Joychan, MD**

**Saili Kalaskar, MD**

**Mirela Loftus, MD**

**Daane Logsdon, DO**

**Salma Malik, MD**

**Lynn Mangini, MD**

**Lisa Namerow, MD, Director of Consultation Services to Connecticut Children's Medical Center, Medical Director for accessmh, IOL hub**

**Francisco Ripepi, MD**

**Kenneth Robson, MD**

**Michael Stevens, PhD**

**Kashmeer Zablan, MD**



*The Division of Community Pediatrics is the largest division at Connecticut Children's Medical Center. There are 89 community-based faculty members with academic appointments in the Department of Pediatrics at the University of Connecticut School of Medicine which includes 40 physicians that are members of the Connecticut Children's Medical Staff Office with active, courtesy, or refer-and follow-up privileges(\*).*

Our members provide primary pediatric care to most children from the Greater Hartford area, including health maintenance, sick care, and behavioral health care. Member pediatricians diagnose most chronic diseases of children in our area. The division is concerned with issues regarding the advocacy and delivery of health care to children in community-based settings and institutions including office-based practice, well-baby nurseries, community health centers, schools, camps, and foster-care adoptive services. Our members work closely with specialists in other divisions to coordinate care for the sickest children in the community. Members work actively with schools, the Department of Children and Families, Birth-to-Three, and other community resources to plan and coordinate ancillary services for at-risk children.

Pediatricians in the division consult with local school systems to address public health and sports medicine issues. Our members serve on a variety of hospital committees, and they provide most of the newborn care at John Dempsey Hospital in Farmington, Hartford Hospital in Hartford, Manchester Memorial Hospital in Manchester, and Saint Francis Hospital in Hartford. Members are interviewed by public media including radio, television and newspapers on a wide variety of pediatric and public health-care issues of local and national interest including childhood obesity, school safety and bullying, vaccine advocacy, and changes to guidelines for cold and cough care for young children.

Division members provide instruction and supervision for student and resident continuity practices as well as the pediatric ambulatory rotation for third year students. In addition to providing rich and varied clinical experiences, members educate students and residents about external issues that influence child health care, such as delivery care models, co-management to address health care plans for children with chronic diseases, coding and other business practicalities in community pediatrics, and time and personal health management. We seek to identify innovative practice styles in health care delivery and opportunities to improve patient education and health outcomes.

Members engage in many collaborative programs within broader department- and state-based initiatives to provide better care for children. These include the Easy Breathing© Program, which has led to improved health practices and better outcomes for children with asthma; the Medical Home initiative, to help coordinate care for children with special health-care needs; and the creation of collaborative practice models/co-management guidelines to provide efficient and cost-effective care.

One of the primary goals of our division is the improvement of care coordination and communication between specialists and generalists. With that purpose in mind, we invite consultants to our monthly meetings to discuss clinical topics of joint interest and address barriers to information sharing. It is our goal to have pediatric care transitions become seamless between hospital and community.

The members of the division, in partnership with physicians from Connecticut Children's specialty divisions, are exploring the creation of a pediatric affordable care organization. This will increase opportunities to provide consistent high quality care to children across the region through the development and adoption of evidence-based care models and provide increased primary care and specialty access for children with chronic diseases and special care needs.

Members are actively involved in ongoing education through grand rounds and evening lecture series in pediatrics and child mental health, to promote topics of interest to the community physicians as well as nurse practitioners, physician assistants, and school nurses who care for children in the community setting.

The division sponsors a lectureship in honor of Christopher O'Connor, MD, that addresses topics of concern to community-based pediatrics.

**STAFF**

**Douglas MacGilpin, MD, co-Division Head\***

**Larry Scherzer, MD, co-Division Head\***

- Robert S. Adamenko, MD\***
- Susan Adeyinka, MD**
- Supriya Atianand, MD**
- Meredith W. Barrows, MD**
- Amy H. Baumer, MD\***
- Lucia C. Benzoni, MD**
- Thomas B. Binder, MD\***
- David L. Brown, MD\***
- Nancy B. Brown, MD**
- William Brownstein, MD**



- \*Carolyn Clark, MD**
- Paul Clarke, MD**
- \*Della M. Corcoran, MD**
- J. Michael Curi, MD**
- Christopher DeSanto, MD**
- Sachin Dhingra, MD**
- \*Leo J. DiStefano, MD**
- Andrea Dixon, MD**
- Robert Dudley, MD**
- \*Allyson Duffy, MD**
- Kari Edelson, MD**
- Jeffrey M. Factor, MD**
- Bruce Freeman, MD**
- Traci Friedman, MD**
- \*Cecille Freilich, MD -**
- \*Thomas Fromson, MD**
- \*Richard W. Geller, MD**
- Gregory S. Germain, MD**
- Mark Gilroy, MD**
- \*Susan Glasser, MD**
- Marshall P. Grodofsky, MD**
- Elizabeth Herz, MD**
- Bryan Holland, MD**
- \*Peter J. Jannuzzi, MD**
- \*Brad Jubelirer, MD**
- \*Anjum Khera, MD**

- Kimberly Kim, MD**
- \*Natalie Komaiszko, MD**
- Lauren Kopyt, MD**
- \*Gubbanna S. Kumar, MD**
- \*Sydney Ladenheim, MD**
- \*Christine Lamoureux, MD**
- \*John H. Lavalette, MD**
- Susan Lelko, MD**
- \*Deepa Limaye, MD**
- Foong-Yi Lin, MD**
- Jennifer Lovin, MD**
- Stephen J. Maddox, Jr., MD**
- Jessica Magda, MD**
- Linda Mathew, MD**
- Shafia Memon, MD**
- Louis M. Mendelson, MD**
- Debora Mihaley-Sobelman, MD**
- Arpana Mohnani, MD**
- \*Margaret O'Neill, MD**
- James O'Connor, MD**
- Kathy Pae, MD**
- \*Susan Owen Perks, MD**
- \*Hemant K. Panchal, MD**
- Christine Patterson, MD**
- \*Elizabeth T. Pericat, MD**
- \*Ishrat Quadri, MD**

- Tricia Pinto, MD**
- Tina Roman, MD**
- Viviann Rubin, MD**
- Bhavna Sacheti-Singh, MD**
- Kweku G. Sam, MD**
- Julie Schiff, MD**
- \*Jennifer Schwab, MD**
- \*Candra L. Smith-Slatas, MD**
- \*Kenneth N. Spiegelman, MD**
- \*Prasad Srinivasan, MD**
- \*Carrie S. Streim, MD**
- Nicole Taylor, MD**
- Persis Thomas, MD**
- \*Robert R. Toscano, MD**
- Kerline A. Vassell, MD**
- Rachna Walia, MD**
- Ramindra Walia, MD**
- \*Matthew Warren, MD**
- \*Harry C. Weinerman, MD**
- \*Allison Whitaker, MD**
- \*Felicia M. Wilion, MD**
- Michael Yenko, MD**
- \*Robert W. Zavoski, MD**
- Sophia Zervas-Grant, MD**
- \*Barbara Ziogas, MD**





*The Division of Pediatric Critical Care is dedicated to the delivery of state-of-the-art child and family centered care for critically ill and injured children.*

The division's mission is accomplished by a collaborative group that champions a multidisciplinary approach to care, the incorporation of best available evidence into clinical practice, and acquisition of new knowledge through clinical research. Attention to patient safety, continuous performance improvement, and education of physicians, nurses, and other care team members is paramount.

Major awards and academic accomplishments among the division members include important contributions to several national societies and both internal and external collaborations:

Dr. Christopher Carroll continues many clinical and translational research activities and collaborations. He lectures frequently at international conferences about topics including asthma and other respiratory diseases, critical care, and new media. He continues in leadership roles in major medical organizations including deputy editor of multimedia for the journal *Chest*, vice chair of the Critical Care NetWork and member of the executive program committee of *Chest*, member of the board

of trustees of the Chest Foundation, and chair of the social media committee of the Society of Critical Care Medicine. Dr. Carroll was awarded a grant from the Institute for Collaboration on Health, Intervention, and Policy (InCHIP) at the University of Connecticut to study how patients and clinicians are using social media to communicate and interact. In 2018, he was awarded the presidential citation from the Society of Critical Care Medicine and the Distinguished Chest Educator Award from *Chest*.

Dr. Adam Silverman continues to build local cultural awareness and support for global health care as the director of the Center for Global Health, which organizes the annual Global Healthcare Symposium and Global Health Film Festival. Over the last two years, he has lectured regionally, nationally, and internationally about global health-care topics. He has organized and led training missions in Haiti to improve the use of CPAP (continuous positive airway pressure) to treat respiratory failure in newborns and small children, taught advanced pediatric resuscitation skills, and led educational courses about pediatric critical care topics. In support of this work, he has received grant funding from the Chest Foundation to have teaching materials translated into French. Locally, he continues to support the Global Healthcare Pathway for pediatric residents, provides supervision for electives for pediatric residents at

Hôpital Bernard Mevs and St. Damien Pediatric Hospital (both in Port-au-Prince, Haiti), and organizes the activities of staff members who travel to developing countries to help improve the health care of children.

Dr. Heather Schlott continues as medical director of the hospital's Extracorporeal Membrane Oxygenation (ECMO) program, in partnership with Pediatric Surgery and Neonatology physician colleagues, as well as nursing, respiratory therapy, and perfusion team members. This technology provides state-of-the-art heart and lung support for our most critically ill and injured patients. The program has grown and been extremely successful, with outcomes that exceed national benchmarks. In fact, Connecticut Children's received a Silver Award (the highest award possible for our size program) for its excellent outcomes from the national Extracorporeal Life Support Organization. This year, she will oversee the incorporation of Registered Respiratory Therapists (RRTs) as part of a hybrid ECMO Specialist Team.

Dr. Schlott also led the development and implementation of our continuous renal replacement therapy (CRRT) program, which has grown with excellent clinical results. These capabilities are key components of modern PICU care and specifically crucial to the expansion of our Cardiac Surgery program.

Efforts that began in 2016 were continued as Dr. Schlott assumed multidisciplinary leadership responsibility for Connecticut Children's participation in the Children's Hospital Association "Improving Pediatric Sepsis Outcomes" Collaborative, which has goals of reducing both sepsis deaths and hospital-onset severe sepsis by 75 percent by 2020.

Dr. Kenneth Banasiak continues his lead role in clinical, educational, and performance improvement aspects of a multidisciplinary collaboration with Cardiology and Cardiac Surgery colleagues. He has implemented clinical pathways that standardize and streamline the care of post-operative patients, resulting in improved inter-service communications, patient safety, staff competency, and patient outcomes. He continues as assistant director of the ECMO program. He has initiated an entirely new comprehensive curriculum, "Critical Care Physiology," focused primarily on the education of residents who intend to go on to careers in acute care subspecialties.

Dr. Daniel Fisher, in collaboration with other staff participants in the Simulation Center, has developed a series of interdisciplinary educational activities focusing on in-hospital resuscitation of patients in emergency situations. Using a high-fidelity simulation manikin, care team learners are presented with a patient in a life-threatening scenario and are called upon to resuscitate the patient. Sessions focus on medical decision-making, critical task completion, and interdisciplinary communication during high risk situations. Dr. Fisher also continues to chair the Medication Safety Management Committee, which evaluates the safety of the institution's medications practices and works to decrease

medical errors. In addition, he continues his participation in the refinement of the hospital's comprehensive electronic medical record. All of these activities have huge impacts on the quality and safety of patient care.

Dr. Leonard Comeau continues his activities to improve the comfort and quality of care for our patients, both in the PICU and hospital-wide. He participates in care delivered by the Sedation Service, and also serves as the leader of the quality and safety oversight activities of the Sedation and Analgesia Committee. He serves as the chair of the hospital Clinical Ethics Committee, which addresses issues related to the appropriateness and decision-making regarding health care for some of our most complicated patients.

Dr. Allison Cowl serves as a member of the steering committee of the Pediatric NetWork for the American College of Chest Physicians. She continues her clinical research collaborations with the Pediatric Acute Lung Injury and Sepsis Investigators (PALISI) international network, focusing on various aspects of the care of critically ill patients, all with the goal of improving the quality of life of patients both during their time in the PICU and long after discharge. These include leading a comprehensive multidisciplinary initiative to recognize and manage delirium, promote early mobilization of patients, and liberate patients as early as possible from mechanical ventilation support. She participates in clinical research protocols evaluating platelet transfusion practices in the pediatric intensive care unit (PICU), as well as the use of prone positioning and various modes of mechanical ventilation in the treatment of patients with severe acute respiratory failure. She serves as the lead for resident education in the PICU, including expansion of the Critical Care subtrack with multiple new rotations for pediatric residents who are pursuing careers in acute care pediatrics (with particular focus on Pediatric Critical Care Medicine). She has mentored house staff in the completion of clinical studies about the role of ECMO in the treatment of asthma, the utilization of two modes of non-invasive pressurized respiratory support devices for treatment of patients with bronchiolitis, and the utility and safety of ketorolac administration in infants under 6 months of age.

Dr. Rosanne Salonia continues her work as a member of the Emergency Response Committee, which oversees the use of the Pediatric Early Warning Score system (PEWS/MET) in focusing attention on patients at risk for clinical deterioration. She manages the associated database and coordinates the ongoing evaluation of the data. She continues her clinical research collaboration with the Pediatric Neuro-critical Care Research Group (PNCRCG), which addresses various aspects of care of patients with severe brain injuries (such as management of sedation and delirium). She is involved in a collaboration with the national Children's Hospitals' Solutions for Patient Safety group, which works to eliminate serious safety events in children's hospitals. She is working with Dr. Fisher and members of the



Emergency Medicine division in resident and staff simulation education sessions to review treatment decisions and team communication during high-risk clinical scenarios.

Division head Dr. Aaron Zucker is the chairperson of the Peer Review Committee, which oversees the medical staff's evaluations of individual physician's clinical performance and patient outcomes in pursuit of the best and safest care for our patients. In conjunction with external and intramural facilitators, he continues as the physician champion of a professional development program designed to improve medical staff members' emotional intelligence, resilience, and engagement, all aimed at reducing physician burnout and positively affecting patient care.

**PUBLICATIONS**

Robinder G, Khemani RG, Smith L, Lopez-Fernandez YM, Kwok J, Morzov R, Klein M, Yehya N, Willson D, Kneyber MCL, Lillie J, Fernandez A, Newth CJL, Jouvet P, Thomas NJ on behalf of the Pediatric Acute Respiratory Distress Syndrome Incidence and Epidemiology (PARDIE) Investigators. Paediatric Acute Respiratory Distress Syndrome Incidence and Epidemiology (PARDIE): an international observational study. *Lancet Respir Med.* 2018.

Hymel KP, Laskey AL, Crowell KR, Wang M, Armijo-Garcia V, Frazier TN, Tieves KS, Foster R, Weeks K, for the Pediatric Brain Injury Research Network Investigators. Racial and ethnic disparities and bias in the evaluation and reporting of abusive head trauma. *J Pediatrics.* 2018 Jul; 198:137-43.

Santos M, Finck C, **Carroll CL.** Social media: finding its place in the medical world. *Conn Med.* 2018; 82:339-42.

**Carroll CL.** Database research in the pediatric ICU: time to go big! *Pediatr Crit Care.* 2018; 19(1):75-6.

Tran A, Campbell JD, Misra MV, Hue YY, **Banasiak K, Schlott H,** Rader C. Surviving 49 days on extracorporeal life support complicated by lung necrosis, pneumothorax, intrathoracic hematoma, and bronchopleural fistulas in a 13-year-old. *J Pediatr Surg Case Rep.* 2018; 36:28-32.

**STAFF**

**Aaron Zucker, MD, Division Head**

- Kenneth Banasiak, MD**
- Christopher Carroll, MD**
- Leonard Comeau, MD**
- Allison Cowl, MD**
- Daniel Fisher, MD**
- Rosanne Salonia, MD**
- Heather Schlott, MD**
- Adam Silverman, MD**

**Petronella Stoltz, APRN**



*The division's mission is: 1) to provide comprehensive and compassionate diagnosis and management for children with neurodevelopmental and behavioral problems that range from normative deviations to rare disorders; 2) to teach health care professionals about these problems; 3) to add to existing knowledge by researching relevant questions in the field; and, 4) to offer advocacy, and to influence public policy.*

The Division of Developmental and Rehabilitation Pediatrics is composed of a diverse faculty of Developmental-Behavioral Pediatricians (DBPeds), an Integrative Medicine (IM) Specialist, a Speech Language Pathologist/Autism Specialist, and an Advanced Practice Nurse (APRN), all of whom practice at a number of sites throughout the state.

**New Staff**

The division met its goal of adding another member in 2018. Susan Dellert, MD, a former UConn Pediatrics resident, joined the division in June. Our primary divisional growth goal was to develop a satellite presence in Fairfield County, and Dr. Dellert is assuming medical directorship of that program.

Jennifer Twachtman-Bassett, MS, CCC-SLP, CCRP, joined the division in October 2018 to serve as autism coordinator. Her role includes expanding the array of services offered, and helping to develop the capacity of the Fairfield County satellite. Keith Ellis, APRN, joined the division in November 2018. He will not only enhance access for families but also help to develop the role of an advanced practice provider in the division.

Division clinical services occur in a number of settings – outpatient, inpatient, and community-based (e.g., schools, CT Birth-to-Three system, and other agencies). We provide direct consultation, ongoing clinical care, and school-based program consultation.

The division's flagship program is the Autism Spectrum Assessment Program (ASAP). Plans are underway for replication of the program in our new Fairfield County location. The current ASAP collaboration includes DBPeds and Speech-Language Pathology, as well as the rapidly growing ASAP Neurogenetics Program, which is under the leadership of Dr. Louisa Kalsner in Neurology. For parents, families and medical providers, this represents a direct line from the autism diagnosis to standard-of-care clinical and laboratory evaluation. It also provides the opportunity for patients to participate in our research collaborations.

Dr. Robert Keder presented four news spots for Fox News on topics including: media use, allowance, executive functioning, and bullying. Dr. Thyde Dumont-Mathieu wrote and presented a four-part educational series on autism for National Public Radio (NPR). Drs. Thyde Dumont-Mathieu and division head Ann Milanese presented a CT-AAP webinar on "How Birth-to-Three Can Be a Pediatrician's Best Partner."

Dr. Keder has established himself in two of the Connecticut Children's primary care settings, as an embedded Developmental-Behavioral Pediatrician to serve the goal of enhancing collaboration and co-management with primary care providers, as well as improving access to care for our highest risk patients and families.

Dr. Mark Greenstein continues in his role of director of residency education in Developmental-Behavioral Pediatrics for medical students, graduate students, and residents in pediatrics. His responsibilities include both the UConn Farmington and Storrs campuses.



Dr. Sarah Schlegel, in collaboration with the Connecticut Children's Care Coordination Center, has established a Developmental Transition Program. It is the first of its kind in the state, and it meets a unique and pressing need for comprehensive support for children with developmental needs as they approach adulthood. Dr. Schlegel continues to develop the School Consultation Program, which provides direct consultation for complex patients within their school districts over the entire state.

Dr. Paul Dworkin continues to be a nationally recognized expert consultant, invited speaker, and moderator for activities sponsored by the Maternal and Child Health Bureau, the Robert Wood Johnson Foundation, Doris Duke Charitable Foundation, Georgetown University National Center, the Children's Hospital Foundation, and the American Medical Association's Integrated Health Model Initiative on topics pertaining to strengthening systems of care to improve children's health and outcomes.



This approach is exemplified by the Help Me Grow® initiative, which was originated in Connecticut and has been successfully replicated in 30 states.

The division continues to support post-graduate education in DBPeds in collaboration with the Behavioral Sleep Center (Dr. Lynelle Schneeberg, sleep psychologist), the Child Abuse Program (Dr. Nina Livingston), the Medical-Legal Partnership (Jay Sicklick, JD), the American School for the Deaf (Jeffrey Bravin), and the Creative Child Care Center at the UConn Health Center (Barbara Brush), along with Acute Rehabilitation (Dr. Milanese), Occupational Therapy (Jeanne Kagan, MA, OTR), and Speech/Language Pathology (Virginia Van Epps, MEd, CCC-SLP, CLC) services at Connecticut Children's.

**Goals for 2019**

- Expand the statewide Developmental Transition Program
- Pursue academic presentations and division research activities
- Hire an additional physician to enhance the division's Fairfield County capacity
- Develop the APRN role, add a psychologist and a care coordinator to develop alternative care models and enhance access to care
- Pursue an R21-NIH grant to study follow-through with the American College of Medical Genetics and Genomics (ACMG)'s recommended genetic consultation in our diverse population of patients who are diagnosed with an Autism Spectrum Disorder (ASD)
- Collaborate with partners in Neurology to pursue a grant from the Simons Foundation Autism Research Initiative (SFARI) to become a clinical site for SPARK (Simons Foundation Powering Autism Research for Knowledge). If funded, the division will serve as one of the main recruitment sites for this project

**PUBLICATIONS**

Dai Y, Brennan L, Como A, Hughes-Lika J, **Dumont-Mathieu T**, Rathwell I, Minxhozii O, Blerina A, Fein D. A video parent-training program for families of children with autism spectrum disorder in Albania. *Res Autism Spectr Disord*. 2018 Dec; 56: 36-49.

Garg A, Sheldrick RC, **Dworkin PH**. The inherent fallibility of validated screening tools for social determinants of health. *Acad Pediatr*. 2018; 18:123-4.

Honigfeld L, **Dworkin P**. Investing in child health to ensure equity, population health, and long-term cost savings: opportunities in state health care reform. Farmington, CT: Child Health and Development Institute of Connecticut, 2018. [Issue Brief No. 62, May 11, 2018]

Kalsner L, **Twachtman-Bassett J**, Tokarski K, Stanley C, **Dumont-Mathieu T**, Cotney J, Chamberlin S. Genetic testing including targeted gene panel in a diverse clinical population of children with autism spectrum disorder: findings and implications. *Mol Genet Genomic Med*. 2018 Mar; 6(2):171-85. doi: 10.1002/mgg3.354. Epub 2017 Dec 21.

Manworren R, Anderson MN, Girard ED, Ruscher KA, **Verissimo AM**, Palac H, Weiss R, Rader C, Hight D. Post-operative pain outcomes after Nuss procedures: comparison of epidural analgesia, continuous infusion of local anesthetic, and preoperative self-hypnosis training. *J Laparoendosc Adv Surg Tech A*. 2018; (10):1234-42.

**RESEARCH/GRANTS**

1. Bridging the Gap: Early Intervention for Underserved Children Within the Medical Home. Connecticut Health Foundation. PI: **Thyde Dumont-Mathieu, MD, MPH**
2. Early Detection of Pervasive Developmental Disorders. PI: Dr. Fein at UConn. **Thyde Dumont-Mathieu, MD, MPH**, co-investigator
3. Connecting the Dots: An RCT Relating Standardized ASD Screening, Intervention Access, and Long-Term Outcomes. PI overall: Dr. Robins; PI at UConn: Dr. Fein; co-investigator: **Thyde Dumont-Mathieu, MD, MPH**
4. Multidisciplinary Autism Research Collaborative (ARC) initiative between Connecticut Children's Medical Center, UConn Health Center, and the Jackson Laboratory: Neuronal Synaptic and Circuit Dysfunction in the Autism Spectrum Disorders. **Ann Milanese, MD**, is one of the PI's. 2013-2018. Funded by: Institute for Systems Genomics.
5. Multidisciplinary APGS initiative between Connecticut Children's Medical Center, UConn Health Center, and UConn – Storrs, Psychology department. 71-185.

**STAFF**

**Ann Milanese, MD, Division Head**

**Mark A. Greenstein, MD, Faculty Education Coordinator**

**Susan Dellert, MD**

**Thyde Dumont-Mathieu, MD, MPH**

**Paul H. Dworkin, MD**

**Robert D. Keder, MD**

**John Pelegano, MD**

**Sarah Schlegel, MD**

**Ana Maria Verissimo, MD**

**Keith Ellis, APRN**

**Jennifer Twachtman-Bassett, MS, CCC-SLP, CCRP**



*The Division of Digestive Diseases, Hepatology, and Nutrition is committed to cutting edge and innovative clinical care of infants, children and adolescents, pioneering clinical, translational, and basic research, and the education of the next generation of physicians.*

In 2018, the division, small by the standards of other children's hospitals, was a leader on both the national and international stages. Our Center for Pediatric Inflammatory Bowel Disease (IBD), the largest program in the region between Boston and New York, currently provides care to over 800 children with Crohn's disease and ulcerative colitis. Pioneering research funded by the National Institutes of Health and the Crohn's and Colitis Foundation has begun to unravel some of the mysteries underlying the genesis of bowel inflammation and provide tools to risk stratify patients at diagnosis to personalize therapy. Connecticut Children's is at the epicenter of pioneering research in pediatric inflammatory bowel disease. Dr. Jeffrey Hyams, division chief, became the initial holder of the Mandell Braunstein Family Endowed Chair in Pediatric Inflammatory Bowel Disease. Funds from the endowment are being used to coordinate the vast clinical and biological information of children with IBD cared for at Connecticut Children's, facilitating clinical care and research.

Our Center for Pediatric Liver Care, directed by Dr. Karan Emerick, provides care to children with a large range of hepatic disorders ranging from chronic hepatitis B and C, metabolic

liver disease, autoimmune disease, and acute and chronic liver failure. It provides pre- and post-transplant care to 40 children. Samantha Lee, APRN, coordinates the program, caring for children with non-alcoholic fatty liver disease (NAFLD) and working closely with other divisions in the hospital. Dr. Emerick serves as an attending physician on the hepatic transplant service at Yale New Haven Hospital six to eight times yearly.

Dr. Wael Sayej directs our eosinophilic esophagitis program along with Susan Goodine, RD. This clinical program has expanded greatly and now cares for almost 300 patients ranging in age from infancy to young adults. Clinical trials of new and emerging therapies are being carried out at Connecticut Children's under Dr. Sayej's leadership.

Our fecal transplantation program, previously headed by Dr. Zev Davidovics, is now directed by Drs. Peter Townsend and Jasmeet Mokha. Dr. Davidovics relocated to Israel in 2018. Dr. Townsend is also the divisional liaison to the inpatient service and works with the Hospitalist Program to improve communication and care of inpatients with gastrointestinal disorders.

Our Multi-Disciplinary Intestinal Rehabilitation Team (IRT) is the only one of its kind in the state. Co-directed by Drs. Mokha and Christine Rader, this group focuses on the care of children with intestinal failure of all causes. Phyllis Bebyn, RN, and Kate Samela, RD, are integral parts of this team, which also facilitates transition from hospital to home. Dr. Mokha is also collaborating with Dr. Erin Young, a pain geneticist at



UConn Health Center, exploring the mechanisms of functional gastrointestinal disorders in children.

Dr. Bella Zeisler is the primary pediatric gastroenterologist in the Aerodigestive Disease Program at Connecticut Children's. This coordinated program of otolaryngologists, pulmonologists, gastroenterologists, and speech therapists cares for children with complex airway, pulmonary and gastrointestinal disorders.

Dr. Fran Mohr has been active as the Division Quality and Safety Officer as part of the GI Service Line Development. She has worked closely on standardizing the use of biologic therapy for children with IBD.

Our fellowship program transitioned from the successful leadership of Dr. Sayej to the team of Drs. Zeisler and Melissa Fernandes, who have assumed responsibility for not only the fellowship program but for pediatric residents and medical students as well. The great depth in our pediatric surgical and radiology programs as well as the great variety of clinical disorders and the intimate involvement of our faculty in education makes our fellowship program particularly attractive.

Victoria Grossi, DO, and Katherine Baldwin, MD, have each completed their initial year as faculty members and have contributed greatly to the depth of the division. In July 2018, Logan Jerger, MD, joined the faculty after completing his fellowship at the Massachusetts General Hospital.

Dr. Brad Jerson, our division's pediatric psychologist, provides fully embedded psychological evaluation and intervention services. He has partnered with other institutional departments and regional community mental health agencies for development of psychosocial programming to address GI symptoms from an evidence-based perspective. Specifically, he has partnered with the Division of Pain and Palliative Medicine to implement "Comfort Ability," a full-day skills-building workshop for adolescents and their parents for coping with chronic pain. Additionally, he has presented at national and regional conferences and workshops about the importance of conceptualizing GI conditions from a biopsychosocial perspective.

## PUBLICATIONS

Spencer EA, Davis SM, Mack DR, Boyle BM, Griffiths AM, LeLeiko NS; PROTECT Study Group, et al., (**Hyams JS**, 25/26). Serologic reactivity reflects clinical expression of ulcerative colitis in children. *Inflamm Bowel Dis*. 2018 May 18; 24(6):1335-43.

Shaw KA, Cutler DJ, Okou D, Dodd A, Aronow BJ, Haberman Y, et al., (**Hyams JS**, 12/24). Genetic variants and pathways implicated in a pediatric inflammatory bowel disease cohort.

*Genes Immun*. 2018 Mar 28. doi: 10.1038/s41435-018-0015-2. [Epub ahead of print]

Venkateswaran S, Prince J, Cutler DJ, Marigorta UM, Okou DT, Prahalad S, et al., (**Hyams J**, 29/30). Enhanced contribution of HLA in pediatric onset ulcerative colitis. *Inflamm Bowel Dis*. 2018 Mar 19; 24(4):829-38.

Kerur B, Machan JT, Shapiro JM, Cerezo CS, Markowitz J, Mack DR, et al., (**Hyams JS**, 23/24). Biologics delay progression of Crohn's disease, but not early surgery, in children. *Clin Gastroenterol Hepatol*. 2018 Sep; 16(9):1467-73.

Sauer CG, Loop MS, Venkateswaran S, Tangpricha V, Ziegler TR, Dhawan A, et al., (**Hyams JS**, 25/26). Free and bioavailable 25-Hydroxyvitamin D concentrations are associated with disease activity in pediatric patients with newly diagnosed treatment-naïve ulcerative colitis. *Inflamm Bowel Dis*. 2018 Feb 15; 24(3):641-50.

Denson LA, Jurickova I, Karns R, Shaw KA, Cutler DJ, Okou D, et al., (**Hyams JS**, 21/34). Clinical and Genomic Correlates of Neutrophil Reactive Oxygen Species Production in Pediatric Patients With Crohn's Disease. *Gastroenterology*. 2018 Jun;154(8):2097-2110.

Robin SG, Keller C, Zwiener R, Hyman PE, Nurko S, Saps M, Di Lorenzo C, Shulman RJ, **Hyams JS**, et al. Prevalence of pediatric functional gastrointestinal disorders utilizing the Rome IV Criteria. *J Pediatr*. 2018 Apr; 195:134-9.

Haberman Y, BenShoshan M, Di Segni A, Dexheimer PJ, Braun T, Weiss B, et al., (**Hyams JS**, 35/37). Long ncRNA landscape in the ileum of treatment-naïve early-onset Crohn disease. *Inflamm Bowel Dis*. 2018 Jan 18; 24(2):346-60.

Church PC, Kuint RC, Ledder O, Navas-López VM, Sladek M, Brückner A, et al., (**Hyams J**, 11/15); ImageKids Study group. Magnetic resonance enterography cannot replace upper endoscopy in pediatric Crohn disease: an Imagekids sub-study. *J Pediatr Gastroenterol Nutr*. 2018 Jul; 67(1):53-8.

Schirmer M, Denson L, Vlamakis H, Franzosa EA, Thomas S, Gotman NM, et al., (**Hyams J**, 27/28). Compositional and temporal changes in the gut microbiome of pediatric ulcerative colitis patients are linked to disease course. *Cell Host Microbe*. 2018 Oct 10; 24(4):600-10.

Lindoso L, Mondal K, Venkateswaran S, Somineni HK, Ballengee C, Walters TD, et al., (**Hyams J**, 35/37). The effect of early-life environmental exposures on disease phenotype and clinical course of Crohn's disease in children. *Am J Gastroenterol*. 2018 Oct; 113(10):1524-9.

Chandradevan R, Hofmekler T, Mondal K, Harun N, Venkateswaran S, Somineni HK, et al., (**Hyams JS**, 22/23). Evolution of pediatric inflammatory bowel disease unclassified (IBD-U): incorporated with serological angene expression profiles. *Inflamm Bowel Dis*. 2018 Sep 15; 24(10):2285-90.

Horneff G, Seyger MMB, Arikian D, Kalabic J, Anderson JK, Lazar A, et al., (**Hyams JS**, 10/10). Safety of adalimumab in pediatric patients with polyarticular juvenile idiopathic arthritis, enthesitis-related arthritis, psoriasis, and Crohn's disease. *J Pediatr*. 2018 Oct; 201:166-75.

Biello C, Fernandez M, Rana A, Lerer T, Buckley E, Bonanni C, **Hyams J**. Effect of patient characteristics and pre-procedure midazolam on propofol dosing for esophagogastroduodenoscopy in children. *J Clin Anesth Pain Manag*. 2018; 1:003.

Fable JM, Fernandez M, Goodine S, Lerer T, **Sayej WN**. Retrospective comparison of fluticasone propionate and oral viscous budesonide in children with eosinophilic esophagitis. *J Pediatr Gastroenterol Nutr*. 2018 Jan; 66(1):26-32.

**Sayej WN**, Foster C, Jensen T, Chatfield S, Finck C. Expanding and characterizing esophageal epithelial cells obtained from children with eosinophilic esophagitis. *Pediatr Res*. 2018 Jun 12. doi: 10.1038/s41390-018-0033-9.

Bull LN, Pawlikowska L, Strautnieks S, Jankowska I, Czubkowski P, Dodge JL, **Emerick K**, et al. Outcomes of surgical management of familial intrahepatic cholestasis 1 and bile salt export protein deficiencies. *Hepatol Commun*. 2018 Mar 30; 2(5):515-28.

Lyons J, Ghazi PC, Starchenko A, Tovaglieri A, **Baldwin KR**, Poulin EJ, et al. The colonic epithelium plays an active role in promoting colitis by shaping the tissue cytokine profile. *PLoS Biol*. 2018 Mar 29; 16(3): e2002417.

Lyons J, Brubaker DK, Ghazi PC, **Baldwin KR**, Edwards A, Boukhali M, Strasser SD, Suarez-Lopez L, Lin YJ, Yajnik V, Kissil JL, Haas W, Lauffenburger DA, Haigis KM. Integrated in vivo multiomics analysis identifies p21-activated kinase signaling as a driver of colitis. *Sci Signal*. 2018 Feb 27; 11(519).

Mimee M, Nadeau P, Hayward A, Carim S, Flanagan S, **Jerger L**, et al. An ingestible bacterial-electronic system to monitor gastrointestinal health. *Science*. 2018 May 25; 360(6391):915-18.

**Zeisler B**, Lerer T, **Hyams J**. Utilization and clinical outcome following 5-aminosalicylate therapy for Crohn's disease. *J Gastroenterol Hepatol Res*. 2018; 3:016.



## STAFF

**Jeffrey Hyams, MD, Division Head**

**Katherine Baldwin, MD**  
**Karan Emerick, MD**  
**Melissa Fernandes, MD**  
**Victoria Grossi, DO**  
**Logan Jerger, MD**  
**Brad Jerson, PhD**  
**Franziska Mohr, MD**  
**Jasmeet Mokha, MD**  
**Wael Sayej, MD**  
**Peter Townsend, MD**  
**Bella Zeisler, MD**

## Fellows

**Temara Hajjat, MBBS**  
**Andrew Fondell, DO**  
**Joelynn Dailey, DO**



*The Division of Emergency Medicine is committed to a continuous quality improvement process, and we have improved our efficiency, the safety of our health-care delivery system, and ultimately our patient satisfaction.*

In 2018, the Emergency Department of Connecticut Children's Medical Center treated 60,654 patients. The Division of Emergency Medicine continues to grow and is composed of 15 Pediatric Emergency Medicine board-certified/eligible fellowship-trained faculty, six per diem Pediatric Emergency Medicine- and Emergency Medicine-trained providers, one Pediatrician, six per diem Pediatricians, 14 Advanced Practitioners, and three per diem Advanced Practitioners.

The number of behavioral health/mental health patients continues to rise. They represent a challenge as they consume many staff resources to maintain their safety, and because of the lack of inpatient beds, they remain in the Emergency Department for prolonged periods of time. Dr. Steve Rogers, director of Emergency Mental Health Services, has been working on innovative ways to care for these patients. In recognition of his efforts, Connecticut Children's is the recipient this year of the *Hartford Business Journal's* Health Care Heroes Award for Advancement in Healthcare-Innovation for advances in care coordination, integrating mental health practice in the pediatric primary care setting and innovation in safety monitoring and interventions. Dedicated staff has been hired to manage this patient population, including behavioral health/mental health advanced practitioners, nurses, mental health social workers, and behavioral health techs. Dr. Rogers has been involved at the state and national levels shaping how mental health is viewed and treated.

The Emergency Department has received other recognitions for excellence. For the second year in a row, Connecticut Children's Medical Center received the Women's Choice Award for Best Children's Hospital for Emergency Care.

Dr. Michael Soltis was promoted to associate professor of Pediatrics in recognition of his work with clinical forensics. He serves on the state's Child Fatality panel and the Abusive Head Trauma working group. He also has taken on the role as medical director of the Transport program.

Education and research continue to be part of our mission. Faculty members teach and mentor pediatric residents, emergency medicine residents, family practice residents, medical students, dental students and advanced practitioner students. Dr. Kristin

Welch has transitioned to Dr. Mariann Nocera the role of faculty education coordinator, which she shares with Dr. Lana Friedman. The Pediatric Emergency Medicine Fellowship is now in its 19th year. Dr. Matt Laurich is the fellowship director. The fellowship currently has a complement of six fellows, accepting two per year for the three-year program. An undergraduate research assistant program that was developed by Dr. Sharon Smith and is taught by our faculty supports the research productivity of our division. Dr. Smith teaches two honors level undergraduate courses at the University of Connecticut. She also serves as the division's director of research and is the director of Pediatric Advanced Life Support (PALS) for the institution. Research projects covering topics such as violence prevention, mental health, simulation, point-of-care ultrasound, ultrasound-guided IV placement, lethal means restriction, nutrition, and asthma are ongoing. The division continues to be productive with many poster presentations at national conferences and publications in peer-reviewed journals.

Members of the Division of Emergency Medicine continue to be highly involved in leadership and committees at Connecticut Children's. Dr. John Brancato, who is associate director of the division, continues to serve in many areas. He provided clinical guidance for the new One Call Center to take over all primary care referral and transport calls for the Emergency Department. Additionally, he is working to raise the bar for children in the western part of the state as the pediatric emergency medicine champion for Western Connecticut Health Network. Dr. Carla Pruden, who serves as medical director of Simulation, leads the division and the institution's efforts in that area. Dr. Nocera has expertise and has supported her in this effort. They host bimonthly simulation sessions for the Emergency Medicine attendings, monthly sessions for the trauma team, monthly sessions for residents and fellows, and ad hoc sessions for the hospital using high fidelity manikins. Dr. Henry Chicaiza is spearheading the development of an emergency medicine point-of-care ultrasound program. This will involve the education and credentialing of the attending staff in bedside ultrasound, and he has taken the lead in developing the curriculum for the fellows. Drs. Eric Hoppa and Welch are active members of the clinical effectiveness committee and have led the production of many pathways that help create standard work and improve the quality of care. Dr. Andrew Heggland leads our continuing education program and our efforts in medical informatics.

The Trauma Program is verified as a Level I Pediatric Trauma Center by the American College of Surgeons, which recognizes the program's dedication to providing optimal care for injured patients. Verified trauma centers must meet the essential criteria that ensure trauma care capability and institutional performance.



## PUBLICATIONS

**Sneller H, Vega C, Zemel L, Chicaiza HP.** Acute hemorrhagic edema of infancy with associated hemorrhagic lacrimation. *Pediatr Emerg Care.* 2018 Aug 14. doi: 10.1097/PEC.0000000000001542. [Epub ahead of print]

**Malia L, Sturm JJ, Smith SR, Brown RT, Campbell B, Chicaiza H.** Diagnostic accuracy of laboratory and ultrasound findings in patients with a non-visualized appendix. *Am J Emerg Med.* 2018 Aug 7. pii: S0735-6757(18)30650-8. doi: 10.1016/j.ajem.2018.08.014. [Epub ahead of print]

**Brooks TM, Friedman LM, Silvis RM, Lerer T, Mikewski MD** 5th. Back pain in a pediatric emergency department: etiology and evaluation. *Pediatr Emerg Care.* 2018 Jan; 34(1):e1-e6.

Mello MJ, Bromberg JR, Wills H, Gaines BA, **Lapidus G, Ranney ML, Spirito A, Parnagian C, Baird J.** Alcohol and other drug use in a sample of admitted adolescent trauma patients. *J Subst Abuse Alcohol.* 2018 May 31; 6(2):1077.

Mello MJ, Bromberg JR, Baird J, Wills H, Gaines B, **Lapidus G, Ranney ML, Parnagian C, Spirito A.** Feasibility and acceptability of an electronic parenting skills intervention. *Telemedicine and eHealth.* Epub 2018 Nov 28; <https://doi.org/10.1089/tmj.2018.0201>.

DiVietro S, Brown S, McQuay J, Green C, Joseph D, **Lapidus G.** Epidemiology of trauma at a Level 1 trauma center, 2007-2015: implications and priorities for injury prevention activities. *Conn Med.* 2018; 82(8):453-8.

Clinton H, Hunter A, Logan S, **Lapidus G.** Evaluating opioid overdose using the National Violent Death Reporting System. *Drug and Alcohol Depend.* 2019 Jan 1;194:371-376. doi: 10.1016/j.drugalcdep.2018.11.002. Epub 2018 Nov 15.

**Kasmire KE, Vega C, Bennett NJ, Laurich VM.** Hypothermia: a sign of sepsis in young infants in the ED? *Pediatr Emerg Med.* 2018 Aug 14. doi: 10.1097/PEC.0000000000001539. [Epub ahead of print]

**Malia L, Laurich VM, Sturm JJ.** Adverse events and satisfaction with use of intranasal midazolam for emergency department procedures in children. *Am J Emerg Med.* 2019 Jan; 37(1):85-88. doi: 10.1016/j.ajem.2018.04.063. Epub 2018 Apr 30.

**Malia L, Wang A, Scheiner L, Laurich VM.** Cold panniculitis following ice therapy for supraventricular tachycardia. *Pediatr Emerg Med.* 2018 Apr 25. doi: 10.1097/PEC.0000000000001491. [Epub ahead of print]

Merritt CM, Daniel M, Munzer BW, **Nocera M, Ross JC, Santen SA.** A cognitive apprenticeship-based faculty development intervention for emergency medicine educators. *West J Emerg Med.* 2018 Jan; 19(1):198-204.

Doshi R, Aseltine R, Wang F, Schwartz H, **Rogers SC, Chen K.** Illustrating the role of health information exchange in a learning health system: improving identification and management of suicide risk. *Conn Med.* 2018 Jun/Jul; 82(6):327-34.





## PEDIATRICIAN

**Christine Cornachio, MD**

## PER DIEM ATTENDINGS

**Zoe Casey, MD**  
**Karl Hellstrand, DO**  
**Sandra Johnson, MD**  
**Seth Lotterman, MD**  
**Sylvia Nash, MD**  
**James Parker, MD**  
**James Wiley, MD**

## PER DIEM PEDIATRICIANS

**Brenda Balch, MD**  
**Meredith Barrows, MD**  
**Jonah Mandell, MD**  
**Charles Thompson, MD**  
**Nancy Trout, MD**

## APRN'S & PA's

**Lauren Appel, APRN**  
**Mandi Boisvert, APRN**  
**Chelsea Byrd, PA-C**  
**Rachel Caplan, APRN**  
**Nicole Chaves, PA-C**  
**Lauren Christofori, PA-C**  
**Katelyn Claudomir, APRN**  
**Carol Erickson, Lead APRN**  
**Ann Gorjanc, PA-C**  
**Jessica Hagggett, APRN**  
**Garry Lapidus, PA-C**  
**Sarah Orlando, PA-C**  
**Christopher Scheinberg, APRN**  
**Lisa Tryon, PA-C**  
**Alexis Veith, PA-C**

## PER DIEM APRNs / PA's

**Keri Curtis, PA-C**  
**Kate Pesce, APRN**  
**Alissa Zalewski, APRN**

## PEDIATRIC EMERGENCY MEDICINE FELLOWS

**Tasha Desai, DO / PGY6**  
**Jacob Greenberg, MD / PGY5**  
**Noah Jablow, MD / PGY6**  
**Ruchika Jones, MD / PGY4**  
**Prina Patel, MD / PGY5**  
**Rahul Shah, MD / PGY4**

Lelonek G, Crook D, Tully L, Trufelli K, Blitz L, **Rogers, SC**. Multidisciplinary approach to enhancing safety and care for pediatric behavioral health patients in acute medical settings. *Child Adolesc Psychiatr Clin N Am*. 2018 Jul; 27(3):491-500.

Roman S, Matthews-Wilson A, Dickinson P, Chenard D, **Rogers SC**. Current pediatric emergency department innovative programs to improve the care of psychiatric patients. *Child Adolesc Psychiatr Clin N Am*. 2018 Jul; 27(3):441-54.

Gandhi S, Lin M, **Smith SR**, Sturm JJ. Predictors of abnormal electrocardiograms in pediatric emergency department. *Ann Pediatr Cardiol*. 2018 Sep-Dec; 11(3):255-60. doi: 10.4103/apc.APC\_155\_17. PMID: 30271014.

**Smith SR**, Johnson ST, Oldman SM, Duffy VB. Pediatric-adapted liking survey: a novel, feasible and reliable dietary screening in clinical practice. *Caries Res*. 2018; 53(2):153-9. PMID: 30089279.

## STAFF

### ATTENDINGS

**John Peng, MD, FAAP, FACEP, Division Head and Medical Director**

**John Brancato, MD, Associate Director**

**Henry Chicaiza, MD**

**Lana Friedman, MD**

**Andrew Heggland, MD**

**Eric Hoppa, MD**

**V. Matt Laurich, MD**

**Mariann Nocera, MD**

**Carla Pruden, MD**

**Steven Rogers, MD**

**Adam Silverman, MD**

**Sharon Smith, MD**

**Michael Soltis, MD**

**Jesse Sturm, MD**

**Kristin Welch, MD**

*This year has been highlighted by extensive growth in the Division of Pediatric Endocrinology and Diabetes, including the addition of three new faculty members. The division has numerous state-of-the-art subspecialty centers with well-established national and international presence and notably was ranked 37th in the nation by U.S. News & World Report this year. Clinical, translational, and basic science research programs have also expanded. The overriding mission of the division continues to be focused on improving the health and quality of life of patients through our clinical expertise, compassionate care, and research investigations toward the development of new treatments.*

The division underwent leadership changes two years ago with the recruitment of Dr. Emily Germain-Lee as chief of Endocrinology and Diabetes at Connecticut Children's Medical Center and tenured professor of Pediatrics at the University of Connecticut School of Medicine. Prior to her move at the end of 2016, Dr. Germain-Lee was a tenured professor of Pediatrics at the Johns Hopkins University School of Medicine and research scientist/professor at Kennedy Krieger Institute in Baltimore. Dr. Rebecca Riba-Wolman, assistant professor in the division over the past six years, smoothly took over the role of clinical director last year and also took on the role of fellowship director (from assistant director) in late 2017; Dr. Christine Trapp (assistant professor) moved into the role of the assistant fellowship director in late 2018. The Endocrinology Fellowship is proud to have three fellows in our program, all of whom are active clinically and in research. Dr. Cem Demirci, who holds the Chase Family Chair of Juvenile Diabetes, continues as director of the very large and successful Diabetes Program, which he has overseen for the past eight years.

The division is proud to have recruited three new faculty in 2018 from around the country: Dr. Bethany Peri, who was an assistant professor at the University of Colorado, as well as medical director of Patient Engagement Technologies at Children's Hospital Colorado; Dr. Angela Verardo, who recently completed her pediatric endocrinology fellowship at the Johns Hopkins University School of Medicine; and Dr. Nordie Bilbao, who came from the University of South Alabama School of Medicine where she was an assistant professor. The division is very fortunate that Dr. Susan Ratzan, one of the former division chiefs, is still active on a part-time basis, and our division now has 12 faculty devoted to patient care and the education of medical students, residents, and fellows. All of the faculty

members have given local, national, and/or international presentations in both the educational and research arenas. The division has created and expanded numerous centers focused on subspecialties within Pediatric Endocrinology. A major focus, both clinically and in the laboratory, is rare bone disorders. This effort is being carried out in the **Center for Rare Bone Disorders** established by Dr. Germain-Lee. Under this overall umbrella center are two translational clinical and research centers dedicated to the treatment and investigation of specific disorders: the Albright Center, which is focused on Albright hereditary osteodystrophy (AHO), and the Osteogenesis Imperfecta (OI) Center, which is focused on brittle bone disease. Another major goal of the Center for Rare Bone Disorders is to elucidate the etiologies of the 20 percent of rare bone disorders for which the cause is not known.

The **Albright Center**, directed by Dr. Germain-Lee, is the first and only center dedicated to Albright hereditary osteodystrophy, which includes pseudohypoparathyroidism type 1A and pseudopseudohypoparathyroidism. Dr. Germain-Lee has evaluated the largest population of patients with AHO worldwide and is one of the co-authors of the first international consensus statement published this year for the diagnosis and management of this condition. Patients travel from throughout the USA and from other countries to the Albright Center. She also has developed a translational research program focused on her patients as well as her knockout mouse model for AHO, which she has shown recapitulates the features of this disorder and can therefore be used to develop new treatments. The **OI Center**, which is co-directed by Drs. Germain-Lee and Nancy Dunbar (assistant professor) is recognized officially by the OI Foundation and is already a premier site in New England and the mid-Atlantic for patients with OI to be evaluated and treated. This center provides clinical care to OI patients, as well as quarterly education and support sessions, and is in the process of expanding its clinical trial capabilities. Dr. Verardo started work in this center in November. Both Drs. Dunbar and Germain-Lee were invited to the OI Foundation National conference for patients and families this year at which Connecticut Children's received widespread attention. In addition, they were again invited to the OI Foundation Scientific Meeting for which approximately 50 investigators from around the world are asked to participate every year. Of note is that Dr. Germain-Lee has an established translational research program that includes both clinical research studies as well as basic science laboratory investigations utilizing mouse models of OI, and she is working toward developing new treatments.

Dr. Dunbar continues to direct the **Metabolic Bone Clinic** at Connecticut Children's and Shriners Hospital in Springfield, MA, which focuses on all forms of bone disorders as well as





A key grant was awarded to Dr. Karen Rubin, a professor in the division and Chief Clinical Transformation Officer of Connecticut Children's. This grant, entitled "Connecticut Newborn Diagnosis and Treatment Network" supports the creation of a **statewide Newborn Screening Network** in partnership with the Department of Public Health to coordinate patient care and therapeutic oversight from infancy through age 21 for patients diagnosed by this screening. This transformational model provides the highest level of care and optimal health outcomes for a population cohort comprising over 64 genetic conditions under the care of geneticists/genetic counselors, endocrinologists, hematologists, and immunologists. Several members of our division have played an integral role in this effort including Drs. Verardo, Trapp, and Riba-Wolman, and Dr. Verardo will be continuing as the main lead for the endocrinology component of this effort.

At Connecticut Children's, approximately 1,200 children and adolescents with diabetes receive multidisciplinary clinical care. Dr. Demirci is medical director of the **Diabetes Program**, as well as the Chase Family Chair in Juvenile Diabetes and assistant professor in the division. His focus is on Type 1 Diabetes Mellitus (T1DM) care and management. In addition to T1DM, he specializes in diabetic disorders caused by single gene defects and cystic fibrosis-related diabetes. Twelve pediatric endocrinologists in the division are involved in providing care for all forms of diabetes including Type 1 and Type 2 DM, monogenic diabetes, maturity onset diabetes of the young (MODY), permanent neonatal diabetes, cystic fibrosis-related diabetes, and steroid-induced diabetes. The Division of Endocrinology and Diabetes is accredited by the American Association of Diabetes Educators (AADE) and has a multidisciplinary team including advanced practice registered nurses, physician assistants, registered dietitians, certified pediatric diabetes educators, and pediatric social workers. Dr. Riba-Wolman is the chair of the Diabetes Quality Committee for the hospital to ensure safe inpatient care.

The diabetes program is also actively involved in research. Dr. Demirci is collaborating with Dr. Derya Unutmaz, a researcher at the Jackson Laboratory in Farmington, CT, to investigate the intestinal microbiome and the link between food, microbes, and diabetes with the ultimate goal of finding which genes are turned on and off as a result of the interaction between the microbiome and the immune system. Dr. Germain-Lee is working on basic science research in diabetes. She is currently collaborating with the Jackson Laboratory/UConn Health investigator, Dr. Se-Jin Lee, on a research program aimed at discovering new strategies to improve the body's ability to control blood sugar levels. The goals of this project, which is being partly supported by a grant from the NIH, are to enhance the ability of the pancreas to produce insulin as well as to improve the responsiveness of peripheral tissues to insulin. The focus of this project is to understand the role of secreted proteins belonging to the transforming growth

disorders of mineral metabolism. Dr. Dunbar has developed a focus on bone loss in children with various physical impairments. With the state-of-the-art DXA machine and infusion capabilities, both Drs. Dunbar and Germain-Lee are able to provide cutting-edge clinical care to patients with all types of bone disorders.

Dr. Germain-Lee has numerous NIH and private grants to support her research on bone disease and also other **rare diseases**. As an adjunct professor at Johns Hopkins and adjunct research scientist at Kennedy Krieger Institute, she is continuing to conduct collaborative grants and projects with physician-scientists working on rare bone disorders and Sturge-Weber Syndrome at these institutions. She has been an active advocate for rare diseases and presented to the Connecticut General Assembly for the state's Task Force to Study Rare Diseases, as well as advocated at Rare Disease Day, with both presentations being held at the State Legislative Office. Dr. Germain-Lee is on the Scientific Advisory Panel for the Rare Bone Disease Alliance comprising international experts who help to expand education, research, and patient advocacy, and she serves as the vice president of the Human Growth Foundation, which advocates for children with growth disorders throughout the world.

factor- $\beta$  superfamily of signaling molecules in regulating metabolism.

Dr. Dunbar is involved in **global health** initiatives. She has been crucial in developing a Type 1 diabetes clinic in Haiti, working with local pediatric staff at Hôpital Sacré Coeur in Milot along with Comalita Elliott, a nurse/diabetes educator in our division. Dr. Dunbar travels to Haiti each year to expand this program. Ongoing fundraising led by Dr. Dunbar supports 100 percent of the needs of the program, and she has made this an important aspect of her research efforts in order to provide a model for implementation of this initiative in other communities in need.

Dr. Sunitha Sura, assistant professor, has headed up the **Lipid Disorders Clinic**, which has been fully running with nutritionist capabilities since September 2018. This is one of the few lipid clinics in the country that are within a pediatric endocrinology and diabetes division and which are focused solely on the management of childhood lipid disorders. Dr. Sura's specialized clinic focuses on genetic disorders of lipids as well as more common lipid abnormalities. She has expertise in appropriate treatment management, whether through medications or dietary modifications. In addition, Drs. Sura and Germain-Lee are active in a company-sponsored clinical trial of a novel lipid-lowering agent in children for heterozygous familial hypercholesterolemia. Dr. Sura's background in basic science laboratory research in lipid metabolism provides a strong foundation for her current clinical and translational research.

The **Turner Syndrome Clinic** is headed by Dr. Rubin, an international expert in the field who also was involved in global consensus statements for Turner syndrome. This clinic has expanded greatly this year. Also, since 2017, long-term efforts headed by Dr. Rubin have been focused on developing an integrated learning system and referral management process that addresses the issues of limited access to subspecialty care. As part of this initiative, e-consults are carried out in our division by Drs. Rubin, Germain-Lee, and Priya Phulwani. Through this program, our physicians provide formal endocrine advice to local pediatricians. This effort will soon expand to other states. Dr. Riba-Wolman is the endocrinologist for the **REACH for the STARS Cancer Survivorship Program**, a multidisciplinary clinic in the Hematology-Oncology Division for long-term survivors of childhood cancer. She also is involved in the **Neuro-Oncology Program**, a multidisciplinary clinic involving Oncology, Neurosurgery, and Endocrinology. She has embarked on clinical research in areas involving the endocrine disorders observed in children with cancer. Notably, she is a member of the New England Childhood Cancer Consortium and is involved in many complex cases regionally.

The **Thyroid Center**, a multidisciplinary program for treating thyroid nodules and thyroid cancer which involves Endocrinology, Pediatric Surgery, Pathology, Radiology, and Nuclear

Medicine, is headed up by Dr. Riba-Wolman and Connecticut Children's Surgeon-in-Chief Dr. Christine Finck. Dr. Nordie Bilbao is involved with Drs. Riba-Wolman and Finck in building this center even further.

The **Gender Program**, run by Dr. Phulwani, provides unique care to children and adolescents with gender dysphoria and also provides tremendous support to families. In November 2018, she presented her work on transgender youth at the World Professional Association for Transgender Health, and her research was accepted for presentation in 2019 at the conference of the European Association for Transgender Health to be held in Rome. Dr. Phulwani participates with members of the Medical Genetics, Urology, and Psychology divisions in a multidisciplinary clinic for **Disorders of Sexual Development** in which her expertise is greatly valued. She has been a major contributor as a speaker for "Project Echo for Complex Integrated Pediatrics" to expand pediatric endocrinology knowledge in order for e-consult providers to manage specific conditions.

Dr. Phulwani serves as the endocrinologist in the multidisciplinary **Bariatric and Weight Management Clinic** overseen by members of the Pediatric Surgery team. In addition, the Endocrinology Division's Dr. Trapp has expertise in caring for children with co-morbidities secondary to obesity as well as those with early onset obesity, and her research interests lie in this area, including the effects of maternal stress on infant weight gain.

Dr. Bethany Peri has made major inroads in the development of patient engagement technologies such as MyChart at Connecticut Children's, and her role in Information Technology has overlapped with her role in our division as a pediatric endocrinologist by effectively implementing electronic resources (such as electronic health records and eliminating paper faxes), thereby improving overall efficiency.

Finally, Dr. David Weinstein, a world-renowned clinical and scientific expert in glycogen storage disorders (GSD) continues as head of the Glycogen Storage Disease Program. As a pediatric endocrinologist by training, his expertise is a highly valued addition to our division. He has an exciting gene therapy trial that was launched this year. (Please refer to the separate section on Dr. Weinstein's Glycogen Storage Disease Program.)

#### NIH Grants

R21HD078864 – The Role of G Protein-coupled Signaling in Neurocognitive and Psychosocial Abnormalities. 3/1/16 - 2/28/18 with no-cost extensions through 2/29/20. PI: Emily L. Germain-Lee, MD.

R01AG052962 – TGF- $\beta$  Family Members and Their Binding Proteins in Aging Skeletal Muscle. 9/15/17 - 5/31/21. Co-investigator: Emily L. Germain-Lee, MD.



U54AR068069 – Brittle Bone Disorders Consortium of the Rare Disease Clinical Research Network. 8/6/14 - 7/31/19. Co-investigator (at Kennedy Krieger site): Emily L. Germain-Lee, MD.

**State Grants**

Connecticut Department of Public Health (DPH) – Connecticut Newborn Diagnosis and Treatment Network. 7/1/18 - 6/30/21. PI: Karen Rubin, MD.

HRSA sub-contract with CHCI/Weitzman Institute – Project Echo for Complex Integrated Pediatrics for Primary Care Providers for Safety-net Youth and Provision of e-Consults. PI at site: Karen Rubin, MD.

**National/International Recognition (highlights)**

**Nancy Dunbar, MD**

National/international speaker for hypophosphatasia

**Emily Germain-Lee, MD**

1) Vice president and member of board of directors, Human Growth Foundation; 2) Editorial board, *Journal of Clinical Endocrinology and Metabolism*; 3) Scientific advisory panel, Rare Bone Disease Alliance; 4) Best Children's Hospitals Diabetes & Endocrinology Working Group for 2018- 2019 & 2019-2020, *U.S. News & World Report* rankings; 5) Society for Pediatric Research (elected member); 6) Member of International Expert Consensus Group on Pseudohypoparathyroidism and Related Disorders (Albright hereditary osteodystrophy); 7) National/international speaker on several rare bone disorders

**Priya Phulwani, MD**

National/international speaker for transgender health

**Rebecca Riba-Wolman, MD**

1) Member of New England Childhood Cancer Consortium; 2) Member of Pediatric Endocrine Society Program Committee

**Karen Rubin, MD**

1) Chair, Pediatric Endocrine Society (PES) Leadership Advantage Program; 2) Member of PES Practice Management Committee; 3) Member of PES Quality Improvement Program; 4) Member of PES Special Interest Group for Turner syndrome; 6) Member of Physician Advisory Board, Turner Syndrome Foundation; 5) Member, Type 1 Diabetes Outcomes Steering Committee (joint initiative by Type 1 Diabetes Exchange and JDRF)

**Christine Trapp, MD**

Member of Pediatric Endocrine Society Obesity Committee

**David Weinstein, MD**

(Please refer to section on Glycogen Storage Disease Program.)

**PUBLICATIONS**

Salemi P, Skalamera Olson J, Dickson L, **Germain-Lee EL**. Ossifications in Albright hereditary osteodystrophy: role of genotype, inheritance, sex, age, hormonal status, and BMI. *J Clin Endocrinol Metab*. 2018; 103(1):158-68.

Mantovani G, Bastepe M, Monk D, de Sanctis L, Thiele S, Usardi A, et al, (**Germain-Lee EL**, 16/46). Diagnosis and management of pseudohypoparathyroidism and related disorders. *Nat Rev Endocrinol*. 2018 Aug; 14(8):476-500.

**Verardo AR**, Clemens TL. Osteoblast bioenergetics and global energy homeostasis. *Nestle Nutr Inst Workshop Ser*. 2018; 89:47-54.

Akhtar Y, **Verardo A**, Crane JL. Multiple endocrine neoplasia type 1 presenting with concurrent insulinoma and prolactinoma in early-adolescence. *Int J Pediatr Endocrinol*. 2018; 2018:7.

**STAFF**

**Emily Germain-Lee, MD, Division Head**

**Rebecca Riba-Wolman, MD, Clinical Director & Fellowship Director**

**Christine Trapp, MD, Assistant Fellowship Director**

**Cem Demirci, MD, Director of Diabetes Program**

**Nordie Bilbao, MD**

**Nancy Dunbar, MD**

**Bethany Peri, MD**

**Priya Phulwani, MD**

**Susan Ratzan, MD**

**Karen Rubin, MD**

**Sunitha Sura, MD**

**Angela Verardo, MD**

**David Weinstein, MD**

(see *Glycogen Storage Disease Program*)

**Karen Bucci, PNP (retired in 2018)**

**Carey Driscoll, PNP**

**Maureen Fearon, PNP**

**Nancy Paulhus-Orkin, PNP (retired in 2018)**

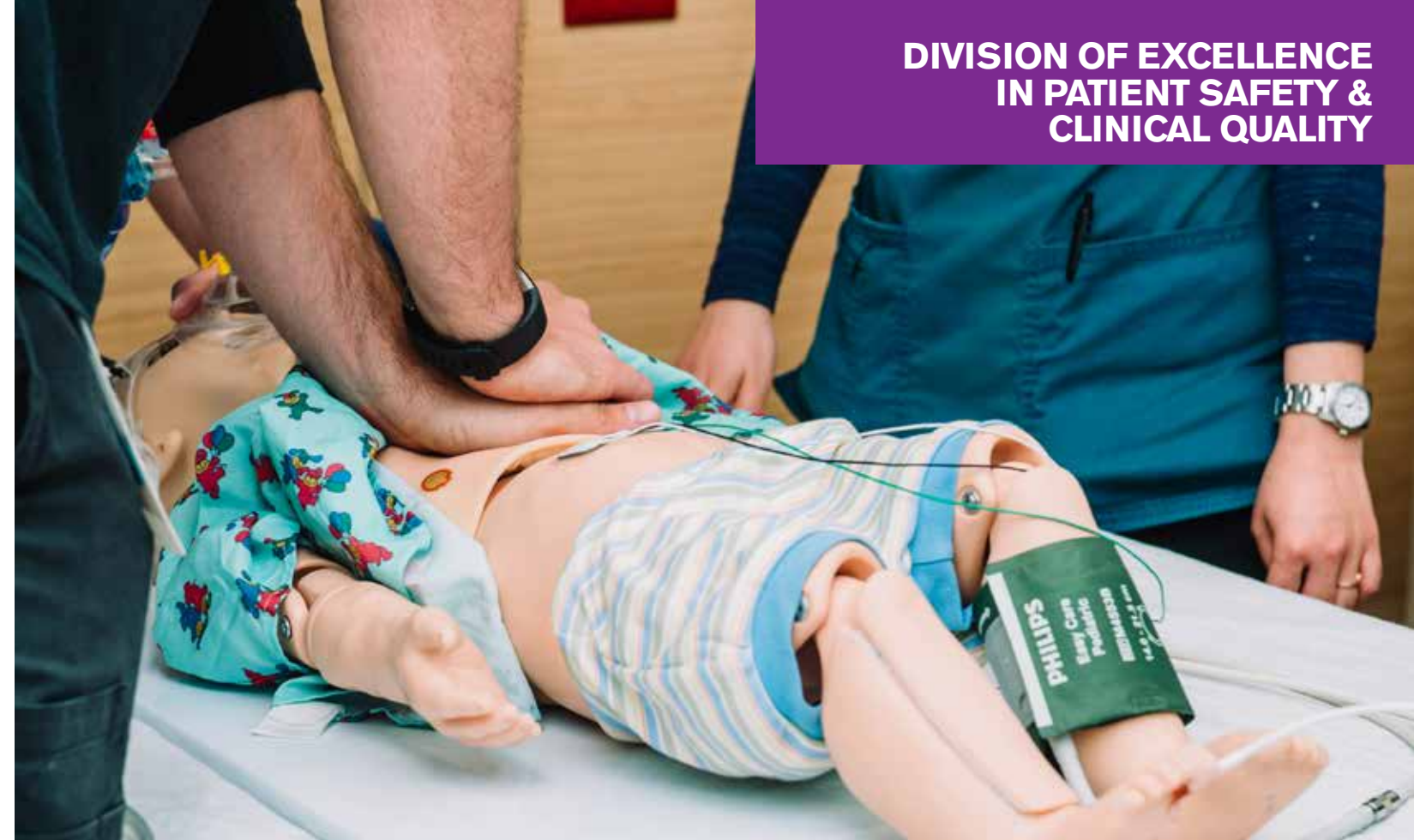
**Elena Schneider, PA**

*Fellows*

**Massiel Sarmiento Mojica, MD; 3rd year**

**Whei Ying Lim, MD; 2nd year**

**Komalben Parmar, MD; 1st year**



*The Division of Excellence in Patient Safety & Clinical Quality strives to support the mission of Connecticut Children's to partner with patients, families and communities using evidence-based models resulting in zero-harm, highest quality, and world-class outcomes in a culture based on continual improvement and compassionate care through the integration of patient safety and quality across the institution. The division's goal is to drive our culture of safety to the standard of zero-harm, to provide the highest quality care, to teach methods of improvement, and to use research to inform our programmatic efforts and innovations. In 2018, the division underwent changes in leadership, with Dr. Heather Tory assuming the role of Interim Division Director/Interim Executive, Patient Safety and Quality.*

In the past year, our faculty was recognized with presentations at national quality and safety conferences. Among the highlights was recognition of Dr. Brendan Campbell and his work with the American College of Surgeons and the National Surgical Quality Improvement Program. His goal is to bring this work to additional surgical subspecialties and conditions. We remain heavily involved in the improvement work of Solutions for Patient Safety (SPS), participating in 10 workgroups, including

a pilot group led by Dr. Sherene Mason that aims to reduce the impact of nephrotoxic acute kidney injury. Dr. Mason has presented her work at SPS and the Illuminations Patient Safety and Quality Conference, as well as at national Nephrology and Rheumatology scientific meetings.

The clinical pathways program continued to grow exponentially under the direction of Dr. Ilana Waynik, and it has developed a greater focus on population health. This year there has been an increased concentration on developing ambulatory care pathways in collaboration with the CCSG Clinical Quality Committee, co-chaired by Drs. Tory and Christopher Grindle. Dr. Waynik is leading our involvement in an American Academy of Pediatrics Value in Inpatient Pediatrics Network project related to care of inpatients with bronchiolitis. Her publication related to the clinical pathway for care of febrile infants was accepted for publication in *Pediatrics*.

The Simulation Program has continued to expand, led by Dr. Carla Pruden and supported by Dr. Mariann Nocera. The breadth and impact of the program have been enhanced to provide simulation sessions for multidisciplinary teams across our care network, covering a range of clinical topics as well as addressing issues related to communication, disclosure and debriefing. The division has supported many efforts to impact the quality of care more broadly across the network, including Dr. David Sink's work in coordinating quality improvement



efforts across the neonatal intensive care units (NICUs). His work in reducing alarm fatigue in two of the NICUs was published this year in the *American Journal of Perinatology*. Dr. Jennifer Giroto has continued to champion the Antimicrobial Stewardship Program, which has produced dramatic effects on prescribing practices throughout the organization.

The division continues to support faculty development through a nationally renowned program in quality improvement methodology and leadership. In 2018, Dr. Eric Hoppa completed the program with his project "Improving Time to Administration of Systemic Corticosteroids to Patients with Moderate to Severe Asthma Exacerbations in the Pediatric ED," leading to reductions in length of stay for this patient population. Drs. Emilee Lewis, Daniel Fisher, Franziska Mohr and Sink have undertaken improvement work as part of national training programs.

The division remains committed to promoting education in quality and patient safety principles and methodology, including teaching of residents, fellows and peers by a number of faculty members. Drs. Natalie Bezler and Tory have led ongoing enhancements in the educational curriculum for pediatric residents, now including the morbidity and mortality curriculum. Dr. Bezler also has worked to implement a robust morbidity and mortality program in the Division of Hematology-Oncology. This year, a new continual improvement educational curriculum was developed specifically for physicians and care providers with Drs. Alex Golden and Tory serving as program sponsors.

In the next year, we look forward to continuing to expand the reach and impact of the division in driving toward zero-harm, safe and high quality care, utilizing scientific methodology, fostering innovation, and promoting inquiry and teaching.

**PUBLICATIONS**

Johnson KR, Hagadorn JI, **Sink DW**. Reducing alarm fatigue in two neonatal intensive care units through a quality improvement collaboration. *Am J Perinatol*. 2018; 35:1311-8.

Talley CL, **Campbell BT**, Jenkins DH, et al. Recommendations from the American College of Surgeons' Committee on Trauma's Firearm Strategy Team (FAST) Workgroup: Chicago Consensus I. *J Am Coll Surg*. Epub 2018 Nov 14.

**Tory HO**, Carrasco R, Griffin T, Huber AM, Kahn P, Robinson AB, Zurakowski D, Kim S. Comparing the importance of quality measurement themes in juvenile idiopathic inflammatory myositis between patients and families and healthcare professionals. *Pediatr Rheumatol Online J*. 2018; 16(1):28-34.

**STAFF**

**Dr. Heather Tory, MD, MPH, Interim Division Head**

- Dr. Natalie Bezler, MD**
- Dr. Brendan Campbell, MD, MPH**
- Dr. Daniel Fisher, MD**
- Dr. Jennifer Giroto, PharmD**
- Dr. Alex Golden, MD, MMM**
- Dr. Christopher Grindle, MD**
- Dr. Eric Hoppa, MD**
- Dr. Emilee Lewis, MD**
- Dr. Sherene Mason, MD, MBA**
- Dr. Franziska Mohr, MD, MRCPCH**
- Dr. Mariann Nocera, MD**
- Dr. Carla Pruden, MD, MPH**
- Dr. David Sink, MD**
- Dr. Ilana Waynik, MD**



*The Division of General Pediatrics is committed to fostering the health and well-being of children, families and communities.*

To realize this mission, we provide exceptional clinical care in partnership with families, teach evidence-based clinical pediatrics to the next generation of pediatric health-care providers, and pursue original research and vigorous advocacy around issues important to children, families and the public. Our activities place special emphasis on caring for children with special health-care needs, including disadvantaged children, children growing up in low-income families, and children with complex and chronic medical conditions.

The Division of General Pediatrics continues to provide the majority of pediatric primary care to Hartford's children through the ambulatory and primary care clinics at Community Health Center (CHC), Inc., at Connecticut Children's, Connecticut Children's Primary Care East Hartford/West Hartford, and the Burgdorf/Bank of America Health Center. Members of the division provide ambulatory care to infants, children, and adolescents, and inpatient care in the newborn nurseries at Hartford Hospital and John Dempsey Hospital/University of Connecticut Health Center, and at Connecticut Children's Medical Center for children with lead poisoning. Our ambulatory services include health supervision, behavioral health care, chronic disease management, and urgent care using a medical home model. Adolescent

Medicine subspecialty primary care and consultative services also are embedded on site at CHC at Connecticut Children's and Primary Care East Hartford/West Hartford. The division houses innovative, community-wide clinical programs such as the Hartford Regional Lead Poisoning Treatment Center and the Reach Out and Read literacy program. General Pediatrics division faculty have gained regional and national prominence for clinical research, education, and program development in the fields of lead poisoning and prevention, culturally effective health care, emergent literacy promotion, and the development of medical home-based systems of care for children and youth with special health-care needs.

This year the division welcomed three talented new faculty members. Drs. Caroline Amin, Shannon Hogan, and Caleb Wasser joined the division as general academic pediatricians. All three are former Connecticut Children's pediatric residents.

The partnership between Connecticut Children's and Community Health Center, Inc., has continued to evolve, with faculty members Drs. Alyssa Bennett, Jennifer Haile, and General Pediatrics division chief Catherine Wiley serving as lead faculty in year two of Project ECHO: Complex Integrated Pediatrics. This collaboration between the Weitzman Institute, with offices in Connecticut and Colorado, and Connecticut Children's provides video-based conferencing on complex pediatric topics, emphasizing integration, collaboration and shared learning between medical, behavioral and specialist providers.

Faculty members in the division play a central role in education in the University of Connecticut system by providing the majority of pediatric primary care and newborn nursery educational experiences for medical students and pediatric residents in the region. Rotating learners from UConn and other institutions include family practice residents, dental residents, psychiatry residents, child psychiatry fellows, and students from nurse practitioner, physician assistant and medical assistant programs. Division members serve on a wide variety of hospital, university and state committees. Membership on national committees includes the National Center for Culture Competence Advisory Group (Dr. Alberto Cohen-Abbo), the Society for Pediatric Dermatology Education Committee (Dr. Keri Wallace), and the Gold Humanism Society (Dr. Paula Lucuara-Revelo). Research interests in the division include emergent literacy, cultural competence, immunization, obesity, and screening in primary care. Division members collaborate in a wide variety of projects, including the Asthma Center's Easy Breathing© program, co-management protocols with Connecticut Children's pediatric subspecialists, and validation of the Childhood Trauma Screen.





Dr. Patricia Garcia continues her work with the REACH (Resident Education in Advocacy and Community Health) pathway and community/advocacy education for all residents, working in collaboration with Connecticut Children's Office for Community Child Health, and a host of community agencies. This year Dr. Garcia was named director of the Healthy Homes program and was appointed as an assistant residency program director. Dr. Wiley continues her advocacy work in the area of emergent literacy and is medical director of Reach Out and Read Connecticut. She also serves as co-chair of the Department of Public Health State Health Improvement Project (Healthy Connecticut 2020) Immunization Committee. Dr. Grae'l O'Brien continues as site director for CORNET (Continuity Clinic Research Network) of the Academic Pediatric Association and has been active on the School of Medicine Curriculum Reform Committee. Drs. Melissa Held and Patricia Joyce continue to transform the highly regarded Ambulatory Pediatrics Clerkship, which has successfully transitioned to the new MDelta curriculum.

Drs. Haile and Garcia received a continuing grant from the Connecticut Department of Public Health for the Hartford Regional Lead Poisoning Treatment Center. Dr. Nancy Trout and Stacy Chandna, MS, CIP, continue their early childhood obesity prevention work, "Start Childhood Off Right," funded by the Kohl's Cares foundation, and are also developing a practice-based quality improvement intervention supported by the Child Health and Development Institute. In partnership with Cincinnati Children's and the Reach Out and Read National Center, Dr. Wiley initiated a study, "Rx for Success: A Randomized Controlled Trial of Technology-Based Dialogic Reading Training Incorporated into Reach Out and Read," funded by the Grossman Family Foundation and the Carol Ann and Ralph V. Haile, Jr./U.S. Bank Foundation. In partnership with the Village for Families and Children, Drs. Wiley, Karen Rubin (Office of Innovation), and Larry Scherzer continue their work on a three-year grant from United Health Foundation, "Two Generation Pediatrics: Integrating Intergenerational Family Services into Primary Care," which supports interdisciplinary primary-behavioral health care and care coordination at the East Hartford and West Hartford sites.

## PUBLICATIONS

**Garcia P, Nezon D, Haile J.** Screening for childhood lead poisoning in the 21st century: lessons learned by an urban primary care center. *Conn Med.* 2018; 82:139-43.

Malia L, Wang A, **Scheiner L**, Laurich VM. Cold panniculitis after ice therapy for supraventricular tachycardia. *Pediatr Emerg Care.* 2018; PMID: 29698337. doi: 10.1097/PEC.0000000000001491. [Epub ahead of print]

Fennell J, **Garcia P.** Bilateral pseudomamma. *Consultant for Pediatricians.* 2018 Jun 18. Epub.

Klima D, Garcia P. Dacryocystocele. *Consultant for Pediatricians.* Epub 2018 Jun 5.

Deng X, **McLaren M.** Using 24-hour weight as reference for weight loss calculation reduces supplementation and promotes exclusive breastfeeding in infants born by cesarean section. *Breastfeed Med.* Epub: 2018 Mar 1. <https://doi.org/10.1089/bfm.2017.0124>.

## STAFF

**Catherine Wiley, MD, Division Head**

**Anton Alerte, MD**  
**Caroline Amin, MD**  
**Sonia Chaudhry, MD**  
**Alberto Cohen-Abbo, MD**  
**Glenn Flores, MD**  
**Patricia Garcia, MD, MPH**  
**Jennifer Haile, MD**  
**Shannon Hogan, DO**  
**Patricia Joyce, MD**  
**Jaye Ladinsky, MD**  
**Paula Lucuara Revelo, MD**  
**Douglas MacGilpin, MD**  
**Margaret McLaren, MD, MBBChir**  
**Lisa Menillo, MD**  
**Amira Mohamed-Ahmed, MD**  
**Jody Navitsky, MD (through July 2018)**  
**Grae'l O'Brien, MD, MPH**  
**Aruna Ramanan, MD**  
**Laurie Scheiner, MD**  
**Larry Scherzer, MD**  
**Jody Terranova, DO**  
**Latesha Dawson Thomas, MD, CLC**  
**Nancy Trout, MD, MPH**  
**Keri Wallace, MD**  
**Caleb Wasser, DO**  
**Lisa Backus, PhD**  
**Amy Signore, PhD**

**Darlene Abbate, APRN**  
**Julia Christofori, APRN**  
**Keith Ellis, APRN**  
**Christine Grem, APRN**  
**Kimberly Griffith, PA-C**  
**Kara Haladyna, APRN**  
**Monica Joyce-Montaudy, APRN**  
**Kathleen Laurie Kelliher, PA-C**  
**Dianne Powers, APRN**  
**Abby Theriaque, APRN**



*The mission of the Glycogen Storage Disease Program is to pursue research while providing the best evidence-based care for children and adults with the disease.*

## Clinical Care

Due to the rarity of the glycogen storage disease (GSD) and the expertise of the team, patients travel from around the world for clinical care. Patients followed by the program travel to Connecticut from 49 states and 49 countries. The program presently follows over 600 patients with GSD.

## Current Lab Research

Under the direction of Youngmok Lee, PhD, laboratory research is currently being conducted in the laboratory facilities at the University of Connecticut Cell and Genome Sciences building. The team was forced to expand this year due to the volume of basic science studies, and Junho Cho, PhD, and Lane Wilson, PhD, have joined the program. Since relocating to Connecticut in 2017, mouse models for GSD type VI and IX have been created. A tissue line which makes human GSD Ib neutrophils ("the artificial bone marrow") was also created by the research team. Present laboratory research includes the following:

- Research development to improve the efficacy of AAV-mediated gene therapy in GSD-Ia mouse model
- Development of kidney-directed gene therapy on GSD-Ia mouse

- Artificial bone marrow generation for GSD-Ib neutrophil research
- Hematopoietic stem cell transplantation for GSD-Ib mouse model
- Generation and characterization of GSD-VI mouse model
- Characterization of GSD-IX mice (PHKB knockout mice)
- Synergistic heterozygosity research evaluating carriers for multiple types of GSD
- Whole exome and genome sequencing of untyped GSD

## Current Clinical Research

After 20 years of research, the first trial of gene therapy for glycogen storage disease type Ia began with the Connecticut Children's/UCConn team as the lead site. In July 2018, the first GSD-Ia patient in the world was treated with gene therapy at the University of Connecticut Health Center, and the low dose arm of this safety and dosing study (Phase I/II) was completed in September 2018. Program director Dr. Weinstein is the principal investigator for this international study. Other clinical research studies are the following:

- United States representative in the International Study for GSD
- Natural history study assessing impact of treatments on GSD
- Biorepository for GSD samples



- Characterization of untyped forms of GSD
- Working with several companies on new treatments for GSD

**COLLABORATION**

**International Collaborations in 2018**

- Dr. Weinstein and the GSD team actively collaborate with other scientists and clinical personnel around the world. In 2018, the team hosted doctors from Argentina, Brazil, Canada, Faroe Islands, Germany, Israel, Italy, Mexico, and South Korea.
- The GSD Program has active collaborations with doctors, nurses, metabolic dietitians, and researchers around the world including Canada, United Kingdom, Faroe Islands, France, Spain, Mexico, the Netherlands, Germany, Poland, Israel, China, South Korea, Argentina, and Brazil.
- In 2018, members of the GSD team presented at professional conferences or invited lectures in Germany, England, Greece, Spain, South Korea and Sweden.

**Domestic Collaborations**

- The GSD team also is active in domestic collaborations. The GSD program helps to staff Camp Cornstarch Kids (Texas), a camp experience dedicated to children with the metabolic disorder.
- The GSD team presented nationally throughout the country.
- A dietitian from Virginia and a nursing student from Ohio State shadowed the Glycogen Storage Disease program.
- College students from Trinity, UConn, Wesleyan, and Dartmouth did research internships with the program.

**PUBLICATIONS**

Dale DC, Bolyard AA, Marrero T, Kelley ML, Makaryan V, Tran E, Leung J, Boxer LA, Kishnani PS, Austin S, **Wanner C, Ferrecchia IA**, Khalaf D, Kurtzberg J, Maze D, Zeidler C, Welte K, **Weinstein DA**. Neutropenia in glycogen storage disease Ib: outcomes for patients treated with granulocyte colony-stimulating factor. *Curr Opin Hematol*. Epub ahead of print 2018 Nov 16. PMID: 30451720.

**Lee Y**, Chou JY, **Weinstein DA**. Response letter. *J Inherit Metab Dis*. 2018 Sep 27. doi:10.1007/s10545-018-0249-1. [Epub ahead of print]

**Lee YM**, Conlon TJ, Specht A, Coleman KE, Brown LM, **Estrella AM, Damska M, Dahlberg KR, Weinstein DA**. Long-term safety and efficacy of AAV gene therapy in the canine model of glycogen storage disease. *J Inherit Metab Dis*. 2018 May 25. doi: 10.1007/s10545-018-0199-7. [Epub ahead of print]

Sim SW, Park TS, Kim SJ, Park BC, **Weinstein DA, Lee YM**, Jun HS. Aberrant proliferation and differentiation of glycogen storage disease type Ib mesenchymal stem cells. *FEBS Lett*. 2018 Jan; 592(2):162-171. doi: 10.1002/1873-3468.12939.

Steunenbergh TAH, Peeks F, Hoogeveen IJ, Mitchell JJ, Mundy H, de Boer F, Lubout CMA, de Souza CF, **Weinstein DA**, Derks TGJ. Safety issues associated with dietary management in patients with hepatic glycogen storage disease. *Mol Genet Metab*. 2018 Sep; 125(1-2):79-85.

**Weinstein DA**, Steuerwald U, De Souza CFM, Derks TGJ. Inborn errors of metabolism with hypoglycemia: glycogen storage disease and inherited disorders of gluconeogenesis. *Pediatr Clin North Am*. 2018 Apr; 65(2):247-65. doi: 10.1016/j.pcl.2017.11.005.

**STAFF**

**David Weinstein, MD, MMSc, Program Director**

- Junho Cho, PhD, Research Scientist**
- Monika Damska, MD, Clinical Research Coordinator**
- Ana Estrella, MD, Laboratory Manager**
- Youngmok Lee, PhD, Basic Science Coordinator; Laboratory Research**
- Lane Wilson, PhD, Research Post-Doctoral Fellow**

- Mihaela Artemie, Clinical Laboratory Technician**
- Amber Barry, RN, BSN, Inpatient Nurse**
- Gail Butler, RN, BSN, Inpatient Nurse**
- Kathy Dahlberg, MA, Research Advocate and Research Coordinator**
- Nitaben Desai, Clinical Laboratory Technician**
- Iris Ferrecchia, RN, CHC, Outpatient Nurse**
- Emma Labrador, RN, BSN, CCRP, Inpatient Nurse**
- Traci Resler, MS, Program Coordinator**
- Kathy Ross, RD, LDN, Metabolic Dietician**
- Ilan Small, Research Student**
- Elizabeth Swietek, Clinical Laboratory Technician**
- Corbinian Wanner, BS, Research Intern**

*The members of the Division of Gynecology at Connecticut Children's Medical Center continue to provide state-of-the-art pediatric and adolescent gynecology consultative services in our four offices, the Connecticut Children's operating rooms, and the Connecticut Children's emergency room, and in-patient settings.*

The clinical services provided include specialty care in all areas of medical and surgical gynecologic care for children and adolescents. These include reproductive health issues, vulvar and vaginal infections in children and adolescents, management of abnormal uterine bleeding and pelvic pain, adolescent endometriosis, congenital abnormalities of the reproductive tract, ovarian cysts and masses, and adolescent hormonal and contraceptive issues. Our team of gynecologists from the Gynecology and Obstetrics Division of Women's Health Connecticut provides 24/7 coverage of the Connecticut Children's Medical Center's Emergency Room, operating room, and inpatient floors.

Our surgical services have continued to include da Vinci robotically assisted minimally invasive gynecologic procedures at Connecticut Children's for selected patients. Division director, Dr. Frederick Rau continues to perform robotically assisted laparoscopic procedures for reproductive tract anomalies.

Office evaluations of pediatric and adolescent patients are done at the Gynecology and Obstetrics Division of Physicians of Women's Health by Dr. Rau, and Drs. Emily Rosenbush, Kerrie Henry, Catherine Graziani, Kelley Sturrock, Erin Pickett, Marlaine Miller, Elizabeth Purcell, Ellen Lamb, and Ashley Young at locations in Hartford, Farmington, Glastonbury and Rocky Hill. Our extensive range of pediatric and adolescent-friendly gynecologists has improved the ability of community physicians to refer families for age-appropriate gynecologic care.

Our physicians are members of the North American Society for Pediatric and Adolescent Gynecology, an international organization dedicated to the gynecologic care of children and teenagers.

At the 2018 American Association of Gynecologic Laparoscopists meeting in Las Vegas, NV, Dr. Rau was awarded Best Video in the Category of Robotic Technology for "Robotic Xi Excision of an Accessory and Cavitated Uterine Mass: An Unusual Cause of Chronic Pelvic Pain in Adolescents."

Our physicians collaborate at Connecticut Children's Medical Center with the University of Connecticut School of Medicine

Obstetrics/Gynecology and Pediatrics residents and the University of Connecticut School of Medicine and Dartmouth Medical School medical students for inpatient, emergency room, and operating room patient care.

Our physicians emphasize a supportive and minimally intrusive strategy while seeing children, adolescents, and families.

For 2019, the division will maintain and improve our patient's access to superior specialty care in pediatric and adolescent gynecology to promote reproductive health and wellness for our community's children and teenagers.

**STAFF**

**Frederick J. Rau, MD, Division Director**

- Catherine Graziani, DO**
- Kerrie Henry, MD**
- Erin Pickett, MD**
- Elizabeth Purcell, MD**
- Emily Rosenbush, MD**
- Kelley Sturrock, MD**
- Marlaine Miller, MD**
- Ellen Lamb, MD**
- Ashley Young, MD**







*The Hematology-Oncology Division strives to improve the lives of children with cancer and blood disorders by delivering high quality family centered academic health care. We continuously improve what we do through discovery and partnerships. We have three broad areas of focus: family centered care, quality and safety, and research and teaching.*

In the past year, the Division of Hematology-Oncology continued to excel in our ability to provide the highest quality of care with our focus on the patient and family experience; we are supported by a talented group of advanced practitioners and nurses as a key component of our service model. We broadened our programs and further developed several areas of expertise. We continued to develop and expand our programs in Survivorship, Supportive Care, and Palliative Care. We also maintained our focus on expanding disease expertise in neuro-oncology, sarcoma and other solid tumors, hematologic malignancies, and in adolescent and young adult oncology. In addition, we also provided cutting-edge research clinical trials within our Advanced Cancer Program for novel therapeutics. We developed new programs in oncofertility and, in collaboration with our Cardiology colleagues, formed a cardio-oncology clinic.

We successfully maintained the alignment of our advanced practitioner staff to provide continuous, streamlined, and patient-centered care in both inpatient and outpatient facilities. We continued our Care Team Model of comprehensive care, supporting each patient's treatment with a team of nurses, advanced practitioners, a social worker, and a physician, to provide longitudinal care. We continue to work to provide a seamless model of care between our clinic, infusion center, and inpatient unit.

We are humbled by our high commendations from patients and families, a testament to our continued striving for a family centered approach to care delivery. We are supported by our two active family advisory councils for sickle cell disease and cancer care. Utilizing their input, we have implemented processes to improve the patient and family experience so that children and families dealing with serious disease can do so with as much comfort and support as possible. We continue to identify ways to improve patient and family experience in collaboration with our family advisory councils.

Under the leadership of Dr. Natalie Bezler, our Quality and Safety Program has been active in seeking ways to improve quality of care delivery as well as patient safety including the implementation of strategies to reduce chemotherapy errors. In

addition, we have continued our regular mortality and morbidity rounds to foster systematic and objective evaluation of cases of adverse outcome in order to enhance our ability to learn from our experience in optimizing patient care. This past year, Dr. Bezler was honored with the Quality Cup Award presented at the annual medical staff meeting in recognition of her contributions within the Division of Hematology-Oncology and throughout the hospital.

Our research efforts continue to grow. Our participation in the Children's Oncology Group is critical to providing access to clinical trials for our patients, and we have one of the highest clinical trial enrollment rates in New England. In addition, we are members of two national consortia: the National Pediatric Cancer Foundation's Sunshine Project and the Beat Childhood Cancer consortium, bringing novel Phase 1 and Phase 2 treatments to children with relapsed and refractory cancers. Led by our division head Dr. Ching Lau, an internationally renowned expert in cancer genomics, we are on course to expand our partnership with Jackson Laboratory for Genomic Medicine in Farmington, CT, to develop a personalized approach to cancer therapeutics using patient-derived xenograft models as well as genetically engineered mouse models of pediatric cancers. The ongoing efforts of Dr. Lau's laboratory at Jackson Lab focus on the discovery and validation of novel biomarkers and therapeutic targets for pediatric cancers and hematologic diseases with the ultimate goal of developing a comprehensive precision medicine program for childhood cancers and blood disorders.

Under the leadership of Dr. Michael Isakoff, the Reid R. Sacco Adolescent and Young Adult Cancer Program, supported by the Reid R. Sacco Adolescent and Young Adult Cancer Alliance and the Nascebini family, has collaborated with and supported our consultation services for young adults in the Hartford region. We have begun to formalize our relationship with the Carole and Ray Neag Comprehensive Cancer Center at UConn Health Center, providing coordinated and collaborative care to adult patients with sarcoma. In addition, we actively participate in the Hartford Hospital surgical conference to review cases where we can lend our expertise. Additionally, Dr. Isakoff has received support from Lea's Foundation for Leukemia Research to support the opening of clinical trials focused on the area of leukemia and lymphoma. Dr. Andrea Orsey is leading the way in advancing the supportive care for patients undergoing cancer therapy. She has continued to work on a yoga intervention project to improve the quality of life for pediatric cancer patients. This past year, Dr. Orsey was awarded a St. Baldrick's Foundation Supportive Care Research Grant to validate integrated care delivery guidelines for anthracycline-induced cardiotoxicity. Dr. Donna Boruchov's expertise and state grant funding for our sickle cell patients has guided

regional standards for exceptional care. She also has received grant funding for participation in nationwide genotyping and a repository of our hemophilia patients. Dr. Boruchov was awarded a Patient-Centered Outcome Research Initiative (PCORI) grant in collaboration with the Children's Hospital of Philadelphia to help advance the care of patients with sickle cell disease. Dr. Bezler was awarded a St. Baldrick's Infrastructure Grant to help develop our Hematologic Malignancies Program.

Dr. Jonathan Bernstein is leading our efforts to bring in clinical trials for patients with bleeding disorders, and in 2019, we hope to begin to open these trials. Dr. Natasha Frederick is an expert in oncofertility and will be helping to expand the services and research of our Adolescent and Young Adult Cancer Program. Her research focuses on improving communication between adolescent and young adult patients and their oncology clinicians on sexual and reproductive health.

In addition to contributing to residency training for which we consistently receive outstanding feedback for our program, we initiated a clinical fellowship program in Pediatric Hematology-Oncology. In 2018, our first fellow began training. This represents another milestone in our mission to provide the best educational opportunities to the next generation of leaders in Pediatric Hematology-Oncology.

## PUBLICATIONS

Oatmen KE, Toro-Salazar OH, Hauser K, Zellars KN, Mason KC, Hor K, **Gillan E**, Zeiss CJ, Gatti DM, Spinale FG. Identification of a novel microRNA profile in pediatric cancer patients treated with anthracycline chemotherapy. *Am J Physiol Heart Circ Physiol*. 2018 Aug 24. doi: 10.1152/ajpheart.00252.2018. [Epub ahead of print] PMID: 30141982.

Bookland M, Tang-Schomer M, **Gillan E**, Kolmakova A. Circulating serum oncologic miRNA in pediatric juvenile pilocytic astrocytoma patients predicts mural nodule volume. *Acta Neurochir (Wien)*. 2018 Jun 18. doi: 10.1007/s00701-018-3589-6. [Epub ahead of print] PMID: 29911246.

Toro-Salazar OH, Lee JH, Zellars KN, Perreault PE, Mason KC, Wang Z, Hor KN, **Gillan E**, Zeiss CJ, Gatti DM, Davey BT, Kutty S, Liang BT, Spinale FG. Use of integrated imaging and serum biomarker profiles to identify subclinical dysfunction in pediatric cancer patients treated with anthracyclines. *Cardio-oncology*. 2018;4. pii: 4. doi: 10.1186/s40959-018-0030-5. Epub 2018 May 1. PMID: 29900007.

Spraker-Perlman HL, Barkauskas DA, Krailo MD, Meyers PA, Schwartz CL, Doski J, Gorlick R, Janeway KA, **Isakoff MS**. Factors influencing survival after recurrence in osteosarcoma:





a report from the Children's Oncology Group. *Pediatr Blood Cancer*. 2018 Sep 25:e27444. doi: 10.1002/pbc.27444. [Epub ahead of print] PMID: 30255612.

**Isakoff MS**, Goldsby R, Villaluna D, Krailo MD, Hingorani P, Collier A, et al. A phase II study of eribulin in recurrent or refractory osteosarcoma: a report from the Children's Oncology Group. *Pediatr Blood Cancer*. 2018 Oct 30:e27524. doi: 10.1002/pbc.27524. [Epub ahead of print] PMID: 30378256.

Borinstein SC, Stepan D, Hayashi M, Loeb DM, **Isakoff MS**, Binitie O, et al. Consensus and controversies regarding the treatment of rhabdomyosarcoma. *Pediatr Blood Cancer*. 2018 Feb; 65(2). doi: 10.1002/pbc.26809. Epub 2017 Sep 14. Review. PMID: 28905489.

Johnson KJ, Broholm H, Scheurer ME, **Lau CC**, Hainfellner JA, Wiemels J, Schwartzbaum J. Advancing brain tumor epidemi-

ology – multi-level integration and international collaboration: the 2018 Brain Tumor Epidemiology Consortium meeting report. *Clin Neuropathol*. 2018 Nov/Dec; 37(6):254-61. doi: 10.5414/NP301148. PMID: 30343678.

Huang L, Garrett Injac S, Cui K, Braun F, Lin Q, Du Y, et al, (**Lau CC**, 16/17). Systems biology-based drug repositioning identifies digoxin as a potential therapy for groups 3 and 4 medulloblastoma. *Sci Transl Med*. 2018 Oct 24; 10(464). pii: eaat0150. doi: 10.1126/scitranslmed.aat0150. PMID: 30355798.

Ma X, Liu Y, Liu Y, Alexandrov LB, Edmonson MN, Gawad C, et al., (**Lau CC**, 27/33). Pan-cancer genome and transcriptome analyses of 1,699 paediatric leukaemias and solid tumours. *Nature*. 2018 Mar 15; 555(7696):371-6. doi: 10.1038/nature25795. Epub 2018 Feb 28. PMID: 29489755; PMCID: PMC5854542.

Nakka M, Allen-Rhoades W, Li Y, Kelly AJ, Shen J, Taylor AM, et al., (**Lau CC**, 13/14); TARGET osteosarcoma consortium. Biomarker significance of plasma and tumor miR-21, miR-221, and miR-106a in osteosarcoma. *Oncotarget*. 2017 May 27;8(57):96738-96752. doi: 10.18632/oncotarget.18236. eCollection 2017 Nov 14. PMID: 29228567; PMCID: PMC5722519.

Tomlinson D, Baggott C, Dix D, Gibson P, Hyslop S, Johnston DL, **Orsey A**, et al. Severely bothersome fatigue in children and adolescents with cancer and hematopoietic stem cell transplant recipients. *Support Care Cancer*. 2018 Nov 26. doi: 10.1007/s00520-018-4555-9. [Epub ahead of print] PMID: 30478671.

Loves R, Tomlinson D, Baggott C, Dix D, Gibson P, Hyslop S, Johnston DL, **Orsey AD**, et al. Taste changes in children with cancer and hematopoietic stem cell transplant recipients. *Support Care Cancer*. 2018 Oct 15. doi: 10.1007/s00520-018-4509-2. [Epub ahead of print] PMID: 30324284.

Hyslop S, Dupuis LL, Baggott C, Dix D, Gibson P, Kuczynski S, Johnston DL, **Orsey A**, et al. Validation of the proxy version of Symptom Screening in Pediatrics Tool in children receiving cancer treatments. *J Pain Symptom Manage*. 2018 Jul; 56(1):107-12. doi: 10.1016/j.jpainsymman.2018.03.025. Epub 2018 Apr 6. PMID: 29630923.

Johnston DL, Hyslop S, Tomlinson D, Baggott C, Gibson P, **Orsey A**, et al. Describing symptoms using the Symptom Screening in Pediatrics Tool in hospitalized children with cancer and hematopoietic stem cell transplant recipients. *Cancer Med*. 2018 May; 7(5):1750-5. doi: 10.1002/cam4.1433. Epub 2018 Mar 23. PMID: 29573197.

Dupuis LL, Johnston DL, Baggott C, Hyslop S, Tomlinson D, Gibson P, **Orsey A**, et al. Validation of the Symptom Screening in Pediatrics Tool in children receiving cancer treatments. *J Natl Cancer Inst*. 2018 Jun 1; 110(6):661-8. doi: 0.1093/jnci/djx250. PMID: 29272441.

Flank J, Schechter T, Gibson P, Johnston DL, **Orsey AD**, Portwine C, Sung L, Dupuis LL. Olanzapine for prevention of chemotherapy-induced nausea and vomiting in children and adolescents: a multi-center, feasibility study. *Support Care Cancer*. 2018 Feb; 26(2):549-55. doi: 10.1007/s00520-017-3864-8. Epub 2017 Aug 30. PMID: 28856448.

Patel P, Robinson PD, Thackray J, Flank J, Holdsworth MT, Gibson P, **Orsey A**, et al. Guideline for the prevention of acute chemotherapy-induced nausea and vomiting in pediatric cancer patients: A focused update. *Pediatr Blood Cancer*. 2017 Oct; 64(10). doi: 10.1002/pbc.26542. Epub 2017 Apr 28. Review. PMID: 28453189.

## STAFF

**Ching Lau, MD, PhD, Division Head**

**Michael Isakoff, MD, Clinical Director**

**Natalie Bezler, MD**

**Jonathan Bernstein, MD**

**Donna Boruchov, MD**

**Natasha Frederick, MD, MPH**

**Kerry Moss, MD**

**Eileen Gillan, MD**

**Andrea Orsey, MD, MSCE**

**Emily Kutner, PhD (until July 30, 2018)**

**Keri Curtis, PA**

**Megan Coco, APRN**

**Meredith Davide, APRN**

**Christine Eaccarino, APRN**

**Karina Engelke, APRN**

**Morgan McCarthy, APRN**

**Victoria Pohl, APRN**

**Kimberly Roche, APRN**

**Katherine Steven, APRN**

**Amanda Zuse, APRN**

*Fellow*

**John Norko, MD**





*The Division of Hospital Medicine is committed to providing evidence-based, family centered and high value care for the hospitalized children and families of Connecticut and the surrounding region. We emphasize quality care, educational excellence and academic scholarship, as we help to shape our young and rapidly expanding field. As recently as October 2016, Pediatric Hospital Medicine (PHM) was recognized for the first time by the American Board of Medical Specialties as an official specialty. During the past year, the division has seen unprecedented growth and success on many fronts.*

Pediatric Hospital Medicine is the fastest growing specialty within Pediatrics and our division has paralleled that growth (Figure 1). We provide inpatient pediatric care at Connecticut Children's Medical Center in Hartford, as well as at our 12-bed satellite unit at St. Mary's Hospital in Waterbury, CT. Patient volume in our main hospital has grown rapidly, with over 80 percent growth in the past five years (2014 to 2018). Starting in January 2018, we expanded our reach to Fairfield County via our new partnership with Western Connecticut Health Network (WCHN). We now oversee the hospitalists and physician assistants who cover the newborn nursery and inpatient units at Danbury and Norwalk hospitals. We have brought to these new locations our own brand of best practice with introduction of family centered rounds, clinical pathways and coverage models that promote greater continuity of care. This expansion has been a huge step forward for our division, and is in strong alignment with the institution's overall strategic plan. Hospitalists now cover 100 percent of general pediatric inpatients in all of our four inpatient locations. We oversee a highly capable group of APRNs and PAs, who provide outstanding care and have helped to lead many of our improvement initiatives.

Clinical accomplishments during the past year were numerous. We have taken a lead role in process improvement, with a focus on optimizing patient flow while ensuring high quality. The division spearheaded a movement to expand family centered rounds from our own group to all other medical specialties within the inpatient setting. Through that work, we have increased nurse presence on daily rounds and have created a culture of increased family engagement in bedside decision-making. We have continued our co-management program, which provides medical expertise in the care of complex surgical patients. This consult service has improved communication and family satisfaction, and has led to better care for children with complex needs. Through our Clinical Effectiveness arm, we have led in standardizing best practice via new clinical pathways that promote the latest evidence-based approaches for over 30 pediatric conditions. We have demonstrated reduced length of stay and costs, while consistently improving patient outcomes. Clinical pathways demonstrate how we, as hospitalists, improve value, defined by higher quality at lower cost, a concept that will be increasingly important as health care systems continue to evolve toward that goal.

The division had numerous educational accomplishments in 2018. Dr. Kathy Kalkbrenner again earned the 2018 Overall Faculty Award for Excellence in Teaching, this time shared with Dr. Trish Garcia and close runner-up Dr. Joanne Cyganowski. All three candidates for this award were from Pediatric Hospital Medicine in 2018! Dr. Christine Skurkis continued to help lead the pediatric residency program, and Dr. Cyganowski took on a new leadership role with the University of Connecticut medical students. The division extended its teaching to the Frank Netter, MD, School of Medicine at Quinnipiac University, in a highly regarded student rotation that takes place at our St. Mary's unit.

Members of the division continue to share their work on a national level. Division head Dr. Anand Sekaran is one of 12 pediatric hospitalists nationally who are writing the first ever AAP PREP exam for Pediatric Hospital Medicine. This exam will serve as a primary learning tool to help hospitalists around the country prepare for the first PHM certifying exam, which is scheduled to take place in 2019. Dr. Sekaran served as associate editor for the PHM Core Competencies document, which defines the core content for the field. Dr. Beth Natt led the community hospital subcommittee for Pediatric Hospital Medicine and was a keynote speaker at our national conference. Dr. Ilana Waynik presented at the national meeting of the American Academy of Child and Adolescent Psychiatry on clinical pathways geared towards mental health. Dr. Alex Hogan presented two workshops at the national PHM meeting and was awarded a CICATS grant from the University of Connecticut to support his pursuit of a K23 award from the NIH. He also was

named as a finalist for the APA Young Investigator Award. His article on asthma control medication, "A Quality Improvement Intervention to Improve Inpatient Pediatric Asthma Controller Accuracy," received the national distinction of being chosen as the top article of 2018 by Hospital Pediatrics.

As hospitalists, we continue to evolve in how we provide value to our patients and families, educate trainees, and improve inpatient care. Our goal is not only to measure our performance against national standards but to be at the top of those benchmarks. Yet as we continue to grow, we strive to maintain our greatest core value of putting patients and families first in all we do.

## PUBLICATIONS

### Book Chapter

**Sekaran AK**, Campbell B. Ovarian torsion. In: Gershel JC, Rauch DA, editors. Caring for the hospitalized child. 2nd ed. A handbook of inpatient pediatrics. American Academy of Pediatrics; 2018.

### Journal Articles

**Hogan AH**, Rastogi D, Rinke ML. A quality improvement intervention to improve inpatient pediatric asthma controller accuracy. *Hosp Pediatr*. 2018 Mar; 8(3):127-34. doi: 10.1542/hpeds.2017-0184. Epub 2018 Feb 13. PubMed PMID: 29440128.

**Hogan AH**, Bellin E, Douglas L, Levin TL, Esteban-Cruciani N. Radiation exposure of premature infants beyond the perinatal period. *Hosp Pediatr*. 2018 Nov; 8(11):672-8. doi: 10.1542/hpeds.2018-0008. Epub 2018 Oct 9. PubMed PMID: 30301739. PubMed Central PMCID: PMC6207094.

**Rudnick M**, Henry K, Trost M. Opportunities to improve inpatient care for children with behavioral comorbidities. *Hosp Pediatr*. 2019 Jan; 9(1):61-3. doi: 10.1542/hpeds.2018-0110. Epub 2018 Dec.

## STAFF

**Anand Sekaran, MD, Division Head**

**Kathy Kalkbrenner, MD, Clinical Director**

**Joanne Cyganowski, MD**

**Patricia Garcia, MD**

**Alex Hogan, MD**

**Jane Im, MD**

**Emilee Lewis, MD**

**Allyson McDermott, MD**

**Marta Neubauer, MD**

**Melanie Rudnick, MD**



**Christine Skurkis, MD**  
**Catherine Sullivan, MD**  
**MacDara Tynan, MD**  
**Ilana Waynik, MD**

**Basia Adams, APRN, leader**  
**Kara Denz-Fluck, PA-C**  
**Christine Giudice, APRN**  
**Jill Herring, APRN**  
**Abby Theriaque, APRN**

## WCHN PROVIDERS

### Danbury:

**Beth Natt, MD, Regional Director of Pediatric Hospital Medicine**  
**Donald Sampson, MD**

**Jacqueline Talbot, PA-C, lead PA**  
**Beth Cross, PA-C**  
**Alexandra Pavain, PA-C**  
**Devin Stimpson, PA-C**  
**Alexis D'Aloisio, PA-C**  
**Lauren Smith, PA-C**  
**Kimberly Orzech, PA-C**

### Norwalk:

**Alicia Briggs, MD**  
**Amanda Begley, MD**

**Pamela Fanning, PA-C, lead PA**  
**Sharon Smith, PA-C**  
**Jennifer Napolitano, PA-C**  
**Nora Croll, PA-C**  
**Jessica Gonzalez, PA-C**  
**Jacquelyn Brown, PA-C**

Hospital Medicine Charges 2010-2018

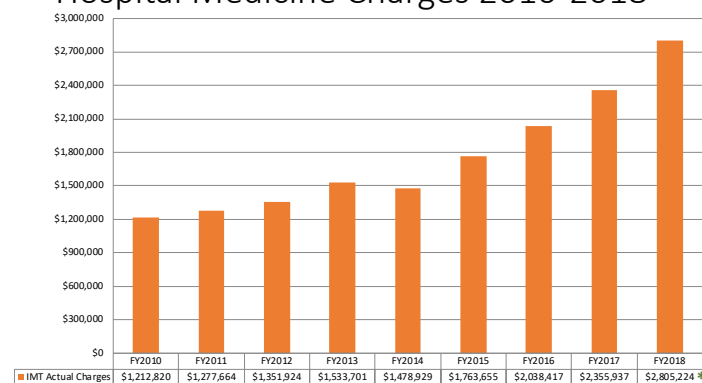


Figure 1



*The Division of Infectious Diseases and Immunology provides excellent care for patients with unusual and chronic infections, and those with immune deficiencies.*

The division continues its clinical work with inpatient and outpatient consult services for infectious diseases and immunology. Our volumes continue to rise, and in 2018, we enjoyed robust growth in our travel medicine program. With the national shortage of Yellow Fever Vaccine, we are the only site in the state of Connecticut offering pediatric-specific travel consult services that include provision of the Stamaril vaccine under an Expanded Access Program. Additionally, Dr. Melissa Held introduced refugee resettlement clinics, performing initial medical evaluations, treatments and vaccinations as needed for refugee children newly arrived in Connecticut. This collaborative program works alongside the existing programs run by Catholic Charities and the Integrated Refugee and Immigrant Services, as well as local family medicine clinics at the University of Connecticut Health Center, and it provides a unique experience for pediatric residents interested in careers in global health.

The Antimicrobial Stewardship Program implemented multiple new initiatives to improve stewardship effectiveness throughout the institution, and continues to work to optimize the clinician

workflow and care provided to patients in the hospital. The new addition of Theradoc as a software solution for real-time notification and reporting for Antimicrobial Stewardship and Infection Prevention demonstrates the institutional commitment to patient safety and improved clinical outcomes. We continue to train successful pediatric pharmacy residents in our unique, fully accredited PGY2 Pediatric Infectious Diseases Pharmacy residency program under the leadership of Jennifer Giroto, PharmD.

Our Ryan White program's funding was renewed through 2019 for its work caring for children and young adults infected with HIV, and those at risk for infection. In addition to our Medical Case Managers' work on the Popular Opinion Leader initiative, school outreach, and the Willow support meetings for mothers infected with HIV, our clinic offers a comprehensive Pre-Exposure Prophylaxis (PrEP) for at-risk youth. PrEP includes testing, counseling, and preventative measures to reduce the risk of acquiring HIV and other sexually transmitted diseases. Our program was also the recipient of a \$100,000 grant from the Connecticut Department of Health to enhance our ability to provide preventative care and HIV testing to at-risk youth.

The division continues to publish cutting-edge research, as well as clinical reports and reviews.



## Active Grants

R21 AI128379 (Caimano) – 08/01/2017-07/31/2019, NIH/NIAID, \$150,000.

Identification of Genes Required by *Leptospira interrogans* for Mammalian Host Adaptation and/or Persistence in the Rat Model.

R01 AI029735 (Radolf/Caimano) – 09/19/2018-08/31/2023, NIH/NIAID, \$330,974.

RpoS Regulation of *Borrelia burgdorferi* Genes in Vivo.

R21AI139940 (Radolf/Caimano) – 06/15/2018-05/31/2020, NIH/NIAID, \$150,000.

*Borrelia burgdorferi* oligopeptide (Opp) Transporter Control of Cellular Homeostasis and Growth.

## PUBLICATIONS

Kasmire KE, Vega C, **Bennett NJ**, Laurich VM. Hypothermia: a sign of sepsis in young infants in the emergency department? *Pediatr Emerg Care*. 2018 Aug 14.

**Bennett N**, Maglione PJ, Wright BL, Zerbe C. Infectious complications in patients with chronic granulomatous disease. *J Pediatric Infect Dis Soc*. 2018 May 9; 7(1):S12-S17.

Meyers R, Weilnau J, Holmes A, **Giroto JE**; Advocacy Committee on behalf of the Pediatric Pharmacy Advocacy Group. Position paper: pharmacists and childhood vaccines. *J Pediatr Pharmacol Ther*. 2018 Jul-Aug; 23(4):343-6.

**DeRonde KJ, Giroto JE**, Nicolau DP. Management of Pediatric Acute Hematogenous Osteomyelitis, Part II: A Focus on Methicillin-Resistant *Staphylococcus aureus*, Current and Emerging Therapies. *Pharmacotherapy*. 2018 Oct;38(10):1021-1037.

**DeRonde KJ, Giroto JE**, Nicolau DP. Management of pediatric acute hematogenous osteomyelitis, part I: antimicrobial stewardship approach and review of therapies for methicillin-susceptible *Staphylococcus aureus*, *Streptococcus pyogenes*, and *Kingella kingae*. *Pharmacotherapy*. 2018 Sep; 38(9):947-66.

**Rodriguez BA, Giroto JE**, Nicolau DP. Ceftazidime/avibactam and ceftolozane/tazobactam: novel therapy for multidrug resistant gram negative infections in children. *Curr Pediatr Rev*. 2018; 14(2):97-109.

**Dassner AM, Giroto JE**. Evaluation of a second-sign process for antimicrobial prior authorization. *J Pediatric Infect Dis Soc*. 2018 May 15; 7(2):113-8.

Trujillo R, **Cervantes J, Hawley KL**, Cruz AR, Babapoor S, Murphy M, Dadras SS, **Salazar JC**. Inflammation and immune evasion coexist in *Treponema pallidum*-infected skin. *JAAD Case Rep*. 2018 Jun;4(5):462-4.

Kumar S, **Caimano MJ**, Anand A, Dey A, **Hawley KL**, LeDoyt ME, La Vake CJ, Cruz AR, Ramirez LG, Pašteková L, Bezsonova I, Šmajš D, **Salazar JC**, Radolf JD. Sequence variation of rare outer membrane protein  $\beta$ -barrel domains in clinical strains of *Treponema pallidum* subsp. *pallidum*, the syphilis spirochete. *MBio*. 2018 Jun 12; 9(3). pii: e01006-18.

Alhamdi JR, Peng T, Al-Naggar IM, **Hawley KL**, Spiller KL, Kuhn LT. Controlled M1-to-M2 transition of aged macrophages by calcium phosphate coatings. *Biomaterials*. 2018 Jul 17. pii: S0142-9612(18)30489-7.

**Held MR**, Kotler H, Sneller H, Sullivan CB. Lemierre's Syndrome presenting as multifocal pyomyositis in a young child. *Pediatr Infect Dis J*. 2018 May; 37(5):e142-e144.

## STAFF

**Nicholas Bennett, MBBChir, PhD, Division Head\***

**Alberto Cohen-Abbo, MD**

**Henry M. Feder, Jr., MD\***

**Melissa Held, MD\***

**Hillary Hernandez-Trujillo, MD**

**Juan C. Salazar, MD, MPH, FAAP\***

**Gavin Schwarz, MD**

**Melissa J. Caimano, PhD**

**Kelly Hawley, PhD**

**Jennifer Giroto, PharmD**

**Grace Hong, APRN\***

**\*HIV Program**

*Medical Case workers*

**Danielle Warren-Dias, MS**

**Nilda Fernandez, LMSW**

**Myrna Millet-Saez**

**Consuelo Muñoz**

**Angel Ruiz**

*Nursing*

**Gail Karas**

**Leah O'Callahan**

**Jennifer Ryiz-Semmel**





*Operational since 2016, the Office of Innovation in Clinical Care Delivery (Office of ICCD) is designed to lead, prepare, and gear up frontline care teams to transform Connecticut Children's into an integrated system managing and optimizing patient outcomes at lower costs. A new position, Connecticut Children's Chief Clinical Transformation Officer (CCTO), was created in 2018 to lead the office, with a focus on population health. The office accelerates clinical transformation within an environment of intense change and growing complexity. The office sets the tone, engages, encourages, and facilitates change and transformation.*

**Approach**

- The ICCD Fosters a deeper understanding and acceptance among physicians and staff of how care redesign opportunities can make their day-to-day less frustrating while improving the patient/family experience
- Plays a facilitator role in the expansion and diversification of care teams in a sustainable and cost-effective manner including links to community-based services

- Designs, implements, analyzes, and communicates survey results aimed at getting a pulse on a current state and clarifying the desired future state; using the results to take immediate action
- Directs care teams to tap into and leverage existing internal resources
- Makes connections across departments and the community to identify potential redundancies and gaps in care
- Works with care teams to see that they can address these challenges together using emerging health-care tools and internal resources that didn't exist before
- Influences faculty and staff to embrace out-of-the-box thinking to address challenges and gaps in care delivery and to leverage the resources needed to bring the most promising ideas to clinical practice

**Awards & Collaborations**

**1)** In response to a request for proposal (RFP) from the Connecticut Department of Public Health (DPH), the division was awarded a three-year grant for a Connecticut Newborn Diagnosis and Treatment Network. The grant funding runs from July 1, 2018, to June 30, 2021, for a total award of \$1,797,531. The award supports the creation of a statewide Newborn Screening (NBS) Network in partnership with the DPH to enable coordinated

patient care in regard to timely and accurate diagnosis and therapeutic oversight from infancy through age 21 for infants diagnosed through NBS. The transformational model applies population health principles and e-Registry tools to provide the highest level of care and optimal health outcomes for a population cohort comprised of over 64 genetic conditions under the care of geneticists/genetic counselors, endocrinologists, hematologists, and immunologists.

**2)** Two-Generation Pediatrics Integrating Intergenerational Family Services, Behavioral Health (BH), and Care Coordination is a jointly funded project with the Village, a longstanding Hartford community agency that provides a full range of behavioral health treatment and supports services for children, families, and adults. The project is funded by United Health Foundation from January 2017 to January 2020, with a total award to Connecticut Children's of \$627,296. The Office of ICCD and the CCTO and Co-PI of the project coordinate and support all aspects of this care transformation endeavor, which includes providing and securing the administrative, technical, analytical, and infrastructure support to drive the project and meeting the deliverables and reporting requirements. This project is informing us of challenges to be overcome in order to integrate BH and Care Coordination into primary care. In addition, it has established a foundation for the Village to become an important community partner.

**3)** The CCTO and PI/Office of ICCD has continued to expand its partnership with the Weitzman Institute, the research and quality arm of Community Health Center Inc. (CHCI), to explore care transformations that change the way primary care providers (PCPs) and subspecialists work together. Together, we received a HRSA sub-award (three-year: \$90,000) plus e-Consult Fee for Service Contract to support this collaboration. It uses technology to bring together two complementary strategies, Connecticut Children's Co-Management/CLASP model and CHCI's e-Consult platform, CeCN, to create a learning health and referral management system that expands PCP scope of practice and addresses the access disparity for safety-net youth and the pressures to reduce costs. The Office of ICCD recruited eight faculty from four subspecialties as e-Consult providers, and 19 divisions have served as subject matter experts for CLASP tools. A related component of this work is the development of a pediatric interdisciplinary Project ECHO for "complex integrated pediatrics," which selects contemporary pediatric conditions with a strong behavioral component and uses a case-based methodology to expand the capability of safety-net providers to manage these conditions. The Office of ICCD coordinates the curriculum and promotes and engages Connecticut Children's Specialty Groups (CCSG) faculty from multiple subspecialties for participation.

**STAFF**

**Karen Rubin, MD, Chief Clinical Transformation Officer (CCTO)**

**Michele Krivickas, Program and Data Coordinator, Office of ICCD**



*The Division of Medical Genetics resides jointly in the Department of Genetics and Genome Sciences as well as the Department of Pediatrics. The mission of the division is to provide high quality, timely and state-of-the-art genetic consultations, counseling, and treatment for patients from the prenatal period throughout childhood and into adulthood.*

We mourn the loss this year of Dr. Robert Greenstein, who died on July 27, 2018. He built and led the division from its inception until his retirement. He will be greatly missed.

Care throughout the lifespan is provided across two campuses by a team of clinical geneticists, genetic counselors and metabolic dietitians. Dr. Joseph Tucker currently serves as interim division head.

It has been an exciting year for the division. Connecticut Children's Medical Center has contracted with the Connecticut State Department of Health to provide newborn screening triage services for the entire state. The core newborn screening team is housed within the Division of Medical Genetics. As part of this effort, an additional 0.5 FTE genetic counselor, 1.0 FTE nurse, 0.8 FTE metabolic dietitian support, and 0.6 FTE data coordinator have been dedicated to provide support for children and adults with conditions identified through newborn screening. Our metabolic clinic is transitioning from the UConn Health campus to Connecticut Children's to provide better continuity of care and care coordination.

Our team currently consists of 1.0 FTE clinical medical geneticist, 2.0 FTE prenatal genetic counselors, 0.8 FTE general genetic counselor, 0.5 FTE newborn screening genetic counselor, 1.8 FTE hereditary cancer genetic counselors, 1.0 FTE teratology counselor, and 0.8 FTE metabolic dietitians. The clinical, administrative, and academic offices are currently housed at the UConn Health satellite 11 South Road, Farmington, CT, where children and adults are seen in a general genetics clinic. Prenatal and hereditary cancer genetic counseling services are provided in the outpatient pavilion on the main UConn Health campus. MotherToBabyCT provides additional prenatal counseling services at 195 Farmington Ave., Farmington, CT. Additional pediatric services are provided at our Connecticut Children's outpatient clinic at 11 South Road, Farmington, CT.

A full-service cytogenetics laboratory run by Dr. Peter Benn at John Dempsey Hospital in Farmington provides genetic testing services.

Increased use of non-invasive prenatal genetic testing continues to increase the number of patients being seen by the prenatal

service, and frequently updated test offerings for patients with hereditary cancers has increased the number of patients being seen and evaluated by the hereditary cancer counseling program. MotherToBabyCT, our teratogen counseling program, is expanding its coverage throughout the state.

Collaborations with Connecticut Children's Medical Center, Department of Public Health Newborn Screening Program, UConn's Maternal-Fetal-Medicine program, and UConn's Carole and Ray Neag Comprehensive Cancer Center in Farmington are robust and active.

The division's educational mission begins in the first year of medical school and goes through postgraduate fellowship. We have an active medical genetics and genomics residency training program. There are also student, resident, fellow, and genetic counseling learners who spend a month's rotation in genetics.

**New/Ongoing Collaborations**

Joseph Tucker, MD, currently serves on the board of directors for New England Regional Genetics Group (NERGG) and serves as a member of the Connecticut State Rare Disease Task Force. He continues in his role as an active member of the GUPPE program, and along with the Urology, Psychiatry, Psychology, and Endocrinology divisions at Connecticut Children's, it provides multidisciplinary care for children with disorders of sexual development.

Sharon Voyer Lavigne, MS, LGC, serves on the board of directors for the Organization of Teratology Information Services (OTIS). She also serves as vice president of the board of directors for Post Partum Support International, CT Chapter.

**STAFF**

**Joseph Tucker, MD, Interim Division Head**

**Peter Benn, PhD**

*Genetic Counselors*

- Alicia Craffey, MS, LCGC**
- Brittany Gancarz, MS, LCGC**
- Ginger Nichols, MS, LCGC**
- Jennifer Stroop, MS, CGC, LCGC**
- Sharon Voyer Lavigne, MS, LGC**
- Connor Linehan, MS, LGC**
- Samantha Wesoly, MS, LCGC**

*Metabolic Dietitians*

- Sherry Gray, MS, MPH, CD-N**
- Kaitlyn Ware, MS, RD, CNSC, CD-N**

*Fellow*

- Jaelyn Beirne, MD**



*The Division of Neonatal-Perinatal Medicine is anchored by our Level IV children's NICU (neonatal intensive care unit) in Hartford, CT. We're proud to be ranked among the Top 25 in the nation by U.S. News & World Report. The division directs one of the largest and most diverse clinical services in New England and is a major perinatal regional center for Connecticut. The primary mission of the division is to provide high quality, state-of-the-art care to neonates in both our state and our region, in addition to advancing education, training, and cutting edge research.*

The division faculty provides care at multiple sites across the state including Connecticut Children's Medical Center (Hartford), Connecticut Children's Medical Center at the University of Connecticut Health Center (UConn Health)/John Dempsey Hospital (JDH) in Farmington, St. Francis Hospital and Medical Center (SFHMC) in Hartford, Eastern Connecticut Health Network (ECHN) in Manchester, the Hospital of Central Connecticut (THOCC) in New Britain, MidState Medical Center in Meriden, William W. Backus Hospital in Norwich, St. Vincent's Medical Center in Bridgeport, Windham Hospital in Willimantic, and Western Connecticut Health Network (WCHN), which includes both Danbury Hospital and Norwalk Hospital. Our faculty members not only work collaboratively across these sites but also are leaders in the Connecticut Perinatal Quality Collaborative, helping to improve maternal and newborn care at the state level. This year, we have expanded our partnerships portfolio to include teleconferencing and joint education

video sessions along with telemedicine capabilities for patient consultation.

Among highlights this year, division head James E. Moore, MD, PhD, was awarded the 2018 Richard Rivas Memorial Teaching Award at the Specialty Review Conference in Neonatology in Orlando, FL. The award recognizes leaders in the field of neonatology and their dedication to teaching at the national level. Dr. Moore will be the 2019 recipient of the Founder's Award from the Southern Society for Pediatric Research (SSPR). This prize recognizes a member of the SSPR who has made significant contributions to the health of children through research and education and has been critical in advancing the group's mission.

Donor Ross Mayer committed to creating the Ross Mayer Endowment Fund, an endowed fund for the NICU in honor of his son, Spencer David Mayer. Mr. Mayer committed \$250,000, a sum that will be matched to create a \$500,000 endowment. This is the largest endowed fund for any division at the medical center. Mr. Mayer surprised Dr. Moore with the gift. He was particularly inspired to create it after seeing that *U.S. News & World Report* had ranked the Connecticut Children's NICU No. 1 in the state.

The division's global outreach initiatives continue with support for neonatal education and resuscitation in Haiti, an effort led by Drs. Vic Herson and Sandy Motta from the divisional faculty. Our team members partner with the NICE Institute in Hyderabad, India, where we helped set up one of the first HIE (hypoxic-ischemic encephalopathy) cooling centers in the country. Dr. Naveed Hussain has continued his work on



education within the region around Hyderabad, utilizing Helping Babies Breathe (HBB), and developing educational electives for residents and Neonatal fellows. Dr. Betté Ford, a second year fellow, is the most recent PG5 to participate in this program and was involved in didactic and simulation teaching in the center. Ongoing developments are underway to allow for regular education sessions via teleconferencing and to develop the ability to provide subspecialty consults via telemedicine to the NICE Institute moving forward.

The research mission of the Division of Neonatal-Perinatal Medicine focuses on several areas including the science of human milk and nutrition with multidisciplinary teams of professionals working within the Connecticut Children's Human Milk Research Center. We also have a core faculty group interested in inflammation biology and NEC (necrotizing enterocolitis) and how Toll-like receptors (TLR) and pregnane X receptor (PXR) are involved within the development of or protection from NEC. Our Neonatal Neurodevelopment Follow-up Clinic (NNFP) is involved in the New England Regional Follow-up Consortium and has been publishing outcomes data from our multiple NICUs. We invite you to explore some of our most recent work below.

As an academic section, education through teaching and mentoring neonatology fellows, pediatric residents, medical students, nurse practitioners, physician assistants and pharmacy students is a primary objective. The faculty continues to lecture and organize National Neonatology board review courses, publish textbooks in the field, and, in 2018, hosted both our third annual Symposium on Neonatal Advances, featuring five international speakers discussing neonatal resuscitation, and also a Neonatal Research Day at our main campus in Hartford. The research day included five regional speakers with topics

covering stem cells in management of neonatal problems, mucosal immunology research, nutrition and breast milk research, and neurosciences.

#### Neonatal Critical Care Transport Team

The Neonatology Division's dedicated Transport Team is responsible for the transport of critically ill neonates from referring hospitals across New England to a newborn intensive care unit (NICU) within our network that is appropriate for the baby's individualized medical needs. We believe in leveraging our clinical neonatal network to provide the right care, at the right place, at the right time, as close to home as possible. The team also transports newborns requiring procedures or evaluations to and from Connecticut Children's Level IV NICU at the Hartford campus. In fiscal year 2018, the Neonatal Transport Team provided approximately 300 transports. Neonatal-Perinatal medicine fellows (PGY4-6) are involved in the transport program. There is graduated responsibility from PGY 4-6 resulting in the capacity for high acuity transports. Fellows participate in transports during on-service rotations and during calls on nights and weekends.

#### Neonatal Neurodevelopmental Follow-Up Program

Connecticut Children's Neonatal Neurodevelopmental Follow-Up Program is a regional program that provides services to all high-risk infants born and discharged from the NICUs in the Greater Hartford and Eastern and Central Connecticut region. The program receives referrals from NICUs at Connecticut Children's in Hartford and Farmington, St. Francis Hospital, the Hospital of Central Connecticut, and Eastern Connecticut Health Network, Connecticut Children's ECMO program, Cardiology, Neurosurgery, Pediatric Surgery and community pediatricians. This is one of only two such programs in state of Connecticut. It provides multidisciplinary comprehensive assessment for

growth and nutrition, as well as neurologic, and developmental and behavioral assessment using standardized developmental testing tools such as the Bayley Scales of Infant and Toddler Development®, Third Edition, and Brief Infant Toddler Social Emotional Assessment. These assessments are conducted by trained providers including neonatologists, occupational and physical therapists, and nurses. Eligible children are seen at regular intervals, starting soon after discharge from hospital to 3 years of age.

#### PUBLICATIONS

Dozier AM, **Brownell EA**, Thevenet-Morrison K, Martin H, **Hagadorn JI**, Howard CR. Predicting maintenance of any breastfeeding from exclusive breastfeeding duration: a replication study. *JPEDS*. 2018 Oct 5. [Epub ahead of print]

**Hagadorn JI**, Bennett MV, **Brownell EA**, Payton K, Benitz WE, Lee HC. Covariation of patent ductus arteriosus management and in-hospital outcomes of preterm birth. *JPEDS*. 2018 Sep 20. [Epub ahead of print]

Penny F, **Brownell E**, Judge M, McGrath JM. Integrated review of cup feeding as a supplemental, alternative feeding method for preterm breastfed infants. *Matern Child Health*. 2018 Oct 16. [Epub ahead of print]

Vittner D, Butler S, Smith K, Makris N, Brownell E, Samra H, McGrath JM. Parent engagement correlates with parent and preterm infant oxytocin release during skin-to-skin contact. *Adv Neonatal Care*. 2018 Oct 16. [Epub ahead of print]

Lindberg T, Caimano M, **Hagadorn J**, Bennett E, Mass K, **Brownell E**, **Matson A**. Preterm infant gut microbial patterns related to the development of necrotizing enterocolitis. *J Matern Fetal Neonatal Med*. 2018 Jul 18:1-10. [Epub ahead of print]

**Brownell EA**, **Matson AP**, Smith KC, **Moore JE**, Esposito PA, Lussier MM, Lerer TJ, **Hagadorn JI**. Interrelationship between donor milk, mother's milk, preterm formula and neonatal growth outcomes. *J Pediatr Gastroenterol Nutr*. 2018 Jul; 67(1):90-6.

Penny F, Judge M, **Brownell EA**, McGrath JM. What is the evidence for use of a supplemental feeding tube device as an alternative supplemental feeding method for breastfed infants? *Adv Neonatal Care*. 2018 Feb; 18(1):31-7.

**Johnson KR**, **Hagadorn JI**, **Sink DW**. Reducing alarm fatigue in two neonatal intensive care units through a quality improvement collaboration. *Amer J Perinatol*. 2018; 35(13):1311-8.

**Lainwala S**, Spizzoucco AM, Kosyakova N, **Herson V**, **Brownell EA**. Clinical and nutritional outcomes of two liquid human milk fortifiers used in preterm infants. *J Neonatal Perinatal Med*. 2017; 10(4):393-401.

Huang K, Mukherjee S, DesMarais V, Albanese JM, Rafti E, Draghi A, Maher LA, Khanna KM, Mani S, **Matson AP**. Targeting the PXR-TLR4 signaling pathway to reduce intestinal inflammation in an experimental model of necrotizing enterocolitis. *Pediatr Res*. 2018 May; 83(5):1031-40.

Bracken SJ, Adami AJ, Rafti E, Schramm CM, **Matson AP**. Regulation of IgE activity in inhalation tolerance via formation of IgG anti-IgE/IgE immune complexes. *Clin Mol Allergy*. 2018 May; 16:13.

Adami AJ, Bracken SJ, Guernsey LA, Rafti E, Maas K, Graf J, **Matson AP**, Thrall RS, Schramm CM. Early-life antibiotics attenuate regulatory T cell generation and increase the severity of murine house dust mite-induced asthma. *Pediatr Res*. 2018 July 2. [Epub ahead of print]

**Pyle AK**, Fleischman A, Hardart G, Mercurio M. Management options and parental voice in the treatment of trisomy 13 and 18. *J Perinatol*. 2018; 38(9):1135-43.

Cantey JB, **Pyle AK**, Wozniak PS, Hynan LS, Sánchez PJ. Early antibiotic exposure and adverse outcomes in preterm, very low birth weight infants. *J Pediatr*. 2018 Aug 29. [Epub ahead of print]

**Hussain N**, Schwenn J, **Trzaski J**, **Pappagallo M**. Stress oximetry: description of a test to determine readiness for discontinuing oxygen therapy in infants with chronic lung disease. *Int J Pediatr*. 2018 Sept 9; 2018:8151678.

Marin T, **Moore JE**. Mesenteric oxygenation changes associated with necrotizing enterocolitis and pneumoperitoneum after multiple blood transfusions. *Adv Neonatal Care*. 2018 Apr; 18(2):121-7.

Potter M, **Rosenkrantz T**, Fitch RH. Behavioral and neuroanatomical outcomes in a rat model of preterm hypoxic-ischemic brain injury: effects of caffeine and hypothermia. *Int J Dev Neurosci*. 2018 Feb 21. [Epub ahead of print]

Procaskey A, White H, Simoneau T, Traeger N, Lahiri T, Jawdeh EGA, Kremer T, Sheils C, Meyer K, **Rosenkrantz T**, Krishnan S, Hartman T, Feldman H, Rhein L. The optimization of home oxygen weaning in premature infants trial: design, rationale, methods and lessons learned. *Contemp Clin Trials*. 2018 Dec; 75:72-77. doi: 10.1016/j.cct.2018.08.001. [Epub ahead of print]

#### Book Chapters

**Pyle AK**. Tick-borne infections. In: Cantey JB, editor. *Neonatal infections: pathophysiology, diagnosis and management*. New York: Springer International Publishing; 2018. p. 173-180.





STAFF

James E. Moore, MD, PhD,  
Division Head

Jose Arias-Camison, MD  
Tina Rita Bafumi, MD  
Fadel Balawi, MD  
Jeffrey Bartlett, DO  
James Belisle, MD  
Arvin Bundhoo, MD  
Brett Citarella, MD  
Leonard I. Eisenfeld, MD  
Annmarie Golio, MD  
Ahmet Gork, MD  
James Hagadorn, MD  
Catherine Hansen, MD  
Victor C. Herson, MD  
Naveed Hussain, MBBS, MD  
Carla Jacobson-Kiel, MD  
Kendall Johnson, MD  
Shabnam Lainwala, MD  
Kathleen Marinelli, MD  
Adam Matson, MD  
Arpana Mohnani, MD  
Sandra Motta, MD  
Mariann Pappagallo, MD  
Indira Panthagani, MD  
Alaina Pyle, MD  
Ted S. Rosenkrantz, MD  
Marilyn Sanders, MD  
Shikha Sarkar, MD  
Meltem Seli, MD  
Julie Sheehan, MD  
David W. Sink, MD  
Morgan Spaight, MD  
Jennifer Trzaski, MD  
Aniruddha Vidwans, MD  
Joseph Vitterito, MD  
Ramindra Walia, MD  
Scott Weiner, MD  
Leslie I. Wolkoff, MD  
Elizabeth Brownell PhD, MA  
Jacqueline McGrath, PhD

Sandra Bellini, DNP, APRN,  
NNP-BC  
Allison Bailey, PA  
Jacquelyn Browne, PA  
Alyson Buck, PA  
Allison DaCruz, PA-C  
Candace Calhoun, PA  
Amy Canino, PA  
Heather Champagne, PA  
Corey Champeau, PA-C  
Gillian Carella, PA

Sabrina Colangelo, PA-C  
Nora Croll, PA  
Beth Cross, PA  
Alexis D'Aloisio, PA  
Shivani Desai, PA-C  
Pamela Fanning, PA  
James Gerace, PA  
Kaitlyn Jones, PA  
Cheryl Juhnke, PA  
Brian Landry, PA-C  
Jessica LaVacca, PA  
Matthew Light, PA  
Sheila Mattei, PA  
Amy Messinger, PA  
Betsy Meyer, PA  
Kristen Moore, PA  
Jennifer Napolitano, PA  
Sandy Narciso-Owen, PA  
Lucia Onofrio, PA-C  
Kim Orzack, PA  
Alexandra Pavain, PA  
Jamilie Rancourt, PA  
Philip Roach, PA  
Meagan Sheakowski, PA  
Jessica Simao, PA  
Lauren Smith, PA  
Sharon Smith, PA  
Devin Stimpson, PA  
Jacqueline Talbot, PA  
Danielle Waite, PA

Susan Beebe, APRN  
Kim Bottone, APRN  
Kate Boxberger, APRN  
Mary Brennan-Centrella, APRN  
Renee Brockett, APRN  
Anna Camacho, APRN  
Stephanie Capps, APRN  
Jessica Cauchon, APRN  
Karen Cleaveland, APRN  
Andrea Dameron, APRN  
Nicole Dugay, APRN  
Michelle Foell, APRN  
Jeanne Franza, APRN  
Margarida Haar, APRN  
Jill Herr, APRN  
Debra Karinski, APRN  
Victoria Langer, APRN  
Kelley Lavine, APRN  
Lindsay Leighton, APRN  
Michelle Letendre, APRN  
Jennifer Long, APRN  
Sherry Matook, APRN  
Niklos Markey, APRN  
Karen McGuinness, APRN

Stephanie McGuire, APRN  
Suanne Menick, APRN  
Karen O'Brien, APRN  
Kim Oski, APRN  
Wendy Petow, APRN  
Wendy Pietruszkiewicz, APRN  
Laura Pittari, APRN  
Terry Poppiti, APRN  
Christine Raymond, APRN  
Heather Remy, APRN  
Megan Richardson, APRN  
Stacey Rubin, APRN  
Jessica Simao, APRN  
Patricia Trehey, APRN  
Lindsay Tucker, APRN  
Rebecca Valentine, APRN  
Laura Van Dyke, APRN  
Erin Vlahakis, APRN  
Alyssa Weiss, APRN  
Mary Young, APRN

Fellows

Jennifer Caldwell, MD  
Aditya Chhikara, MD  
Betté Ford, MD  
Rachel Koski, MD  
Mishika Malik, MD



*In 2018, the Nephrology service experienced growth through the provision of cutting edge therapies including plasmapheresis, and by increasing the division's number of providers. Nephrology was approved to begin the design and construction of what will be the first pediatric dialysis unit in the state. The division also saw continued excellence in transplant services and outcomes.*

The year of 2018 was a clinical success. While we were sorry to see the departure of Dr. Samriti Dogra, who relocated, we were delighted to welcome Dr. Robyn Matloff to the division in June, enabling us to successfully push forward with plans to bring care into the Fairfield market. The division continues to be robust with four board-certified pediatric nephrologists, a dietitian, a physician assistant, three nurses, and a dedicated full-time social worker. Strong clinical relationships exist with Urology and Transplant Surgery to provide seamless, comprehensive care for our patients, regardless of where they are located in our hospital.

In 2018, the division increased clinical services by beginning an Ambulatory Blood Pressure Monitoring (ABPM) program

spearheaded by Dr. Ian Macumber. This program is providing comprehensive hypertensive care not only in Hartford, but at all Connecticut Children's locations across Connecticut and western Massachusetts. The division had continued steady outpatient visits of around 5,500 for the year. The visits were comprised of pre-transplant, post-transplant, inpatient, and outpatient consults as well as acute and chronic dialysis. Our Renal Transplant service continued with three recipients for the year, and our patients are now undergoing cutting-edge, steroid-free protocols. The division continues to work closely with the ICU on a regular basis to provide continuous veno-venous hemodiafiltration for our sickest patients.

The division has continued to participate in prestigious research consortiums including the SCOPE (Standardizing Care to Improve Outcomes for Pediatric ESRD) Collaborative and the Midwest Pediatric Nephrology Consortium (MWPNC). These collaboratives produce quality- and research-driven outcomes in the department. The division continued with multiple research initiatives and demonstrated high productivity with papers and abstract presentations at national meetings. The division has 16 active IRB-approved research studies as well as joint research collaborations with other divisions.

This year our team exhibited national academic excellence





*The division continued to expand its services in 2018 in order to provide comprehensive state-of-the-art neurology services for pediatric patients. Ms. Dina Conely, our new APRN, started this year and provides follow-up visits for headache and Tourette patients. We have a new faculty member, Dr. Elizabeth Ng, who took over the EMG diagnostics and provides expanded services for the EEG/epilepsy program.*

The neuromuscular program received a grant from the CureSMA (Spinal Muscular Atrophy) organization to establish the SMA Care Center for comprehensive evaluation and treatment of this patient population. Our Rehabilitation services have been discontinued due to the resignation of the physiatrist, Dr. Edwin Cruz-Zeno.

The Neurology Division evaluates and treats pediatric patients with all types of neurological diseases including headaches, epilepsy, neurocutaneous, neurodevelopmental and other neurogenetic disorders and diseases, cerebral palsy, nerve and muscle diseases, movement disorders, and neuroinflammatory conditions. Epilepsy patients receive comprehensive care in the Epilepsy Center directed by Dr. Jennifer Madan Cohen. The treatment options include ketogenic diet and epilepsy surgery in collaboration with the Neurosurgery Division. Dr. Mark Schomer has started a research project in neonatal epilepsies, and he collaborates with the University of Connecticut in Storrs. The Autism Genetic Research Program, led by Dr. Louisa Kalsner, enrolls established autism patients for genetic studies. Dr. Kalsner has applied for new research grants. Dr. William Graf sees patients for diagnosis of neurodevelopment conditions and is an internationally recognized expert in pediatric bioethics. Dr. Francis DiMario directs the Neurogenetics Clinic, which is focused on the evaluation and care of patients with neurocutaneous disorders. This clinic is recognized by the TS Alliance (TSA) as a specialty care clinic that provides advanced treatment for patients with Tuberous Sclerosis Complex and is also recognized by the Children's Tumor Foundation as part of the Neurofibromatosis Clinic Network (NFCN). The Neuromuscular Disease program, led by division head Dr. Gyula Acsadi, is one of the few pediatric sites for Center of Excellence for pediatric Charcot-Marie-Tooth disease in the country, which is part of the Inherited Neuropathy Consortium supported by the National Institutes of Health (NIH) Rare Disorder Research Center and the Muscular Dystrophy Association (MDA). This center collaborates with Sylvia Öunpuu of the Center of Motion Analysis and Dr. Kristan Pierz of Orthopaedics.

The division members presented their work at numerous national and international conferences. We continue to be involved in several clinical trials for tuberous sclerosis, autism, epilepsy, and SMA.

**Awards/Honors**

Dr. Graf was appointed to the American Academy of Neurology Drug Pricing Task Force and Brain Death Working Group. He was reappointed to the American Academy of Neurology Ethics, Law, and Humanities Committee, and reappointed as the chair of the Ethics Committee of the Child Neurology Society (CNS).

Dr. Francis DiMario was the recipient of the University of Connecticut's Department of Pediatrics 2018 Didactics Teaching Award for Excellence in Resident Teaching.

**Active Grants**

MDA Care Center Grant from the Muscular Dystrophy Association (3 years).

New grant from the CureSMA organization to establish a SMA Care Center.

Educational Grant from the Children's Tumor Foundation.

Dr. Acsadi is the site PI for a 5-year study of SMA treatment funded by Biogen.

HRSA Grant awarded to the Epilepsy Foundations of CT Northeastern New York and New Jersey. Improving Accurate Diagnosis & Treatment of Epilepsy: A Training for Pediatric Practice Teams.

Affinity Research Collaborative (ARC); the Institute for Systems Genomics at the University of Connecticut. Neural synaptic and circuit dysfunction in the autism spectrum disorders. \$250,000 over 5 years. (Currently in year 3) Co-PI: Louise Kalsner, MD.

Connecticut Bioinnovations. Adaptive Clinical Genomics for Precision Medicine (with Jackson Laboratory) to investigate the use of a new genomic technology called Allseq in the evaluation of children with autism. Investigator: Louise Kalsner, MD.

University of Connecticut Provost's Academic Plan Award. TSC2 Variant Without Clinical Findings of Tuberous Sclerosis as a Risk Factor for Idiopathic Autism Spectrum Disorder. \$300,000 over 3 years. Co-PI: Louise Kalsner, MD.

Novartis Pharmaceuticals Inc. Multicenter Clinical Trial. A three-arm, randomized, double-blind, placebo-controlled study of the

with division head Dr. Cynthia Silva presenting her work on nephrogenic diabetes insipidus at the American Society of Nephrology. Dr. Sherene Mason was awarded the University of Connecticut's H. Fred Simons African American Cultural Center 2018 Outstanding Young Alumni Award. Dr. Mason also had three invited poster presentations at Connecticut Children's Illuminations Quality and Safety Annual Conference in October 2018.

As we look forward to the upcoming year, we expect to increase volume as we expand ambulatory blood pressure monitoring services toward Danbury and Fairfield, CT, and to Baystate Medical Center in Springfield, MA. We also will continue our extensive research portfolio and increase IRB-approved, research-funded studies.

**PUBLICATIONS**

Carpenter SL, Goldman J, Sherman AK, Selewski DT, Kallash M, Tran CL, et al, (**D'Alessandri-Silva C**, 12/22). Association of infections and venous thromboembolism in hospitalized children with nephrotic syndrome. *Pediatr Nephrol*. 2018 Sep 7. doi: 10.1007/s00467-018-4072-6.

Selewski DT, Ambruzs JM, Appel GB, Bomback AS, Matar RB, Cai Y, et al, (**D'Alessandri-Silva C** 10/54), (**Mason S**, 21/54). On behalf of the CureGN Consortium\*. Clinical characteristics and treatment patterns of children and adults with IgA nephropathy or IgA vasculitis: findings from the CureGN Study. *Kidney Int Rep*. 2018 Nov; 3(6):1373-84. PMID: PMC6224619.

Pelletier JH, Kumar KR, Engen R, Bensimhon A, Varner JD, Rheault MN, Srivastava T, Straatmann C, **Silva C**, et al, (**Selewski D**, 13/27). Recurrence of nephrotic syndrome following kidney transplantation is associated with initial native kidney biopsy findings. *Pediatr Nephrol*. 2018 Oct; 33(10):1773-80. doi: 10.1007/s00467-018-3994-3.

**D'Alessandri-Silva CJ**, Carpenter M, Mahan J. Treatment regimens by pediatric nephrologists in children with congenital nephrogenic diabetes insipidus. *Clin Nephrol*. 2018 May; 89(5):358-63. PMID:29162216.

Adeyemo A, Esezobor C, Solarin A, Abeyagunawardena A, Kari JA, El Desoky S, Greenbaum LA, et al, (**Silva C**, 10/15). HLA-DQA1 and APOL1 as risk loci for childhood-onset steroid-sensitive and steroid-resistant nephrotic syndrome. *Am J Kidney Dis*. 2018 Mar; 71(3):399-406. PMID:29277510.

**STAFF**

**Cynthia D'Alessandri-Silva, MD, FAAP, Division Head**

**Samriti Dogra, MD**  
**Ian Macumber, MD**  
**Sherene Mason, MD, FAAP, MBA**  
**Bruce McDonald, MD, FAAP**  
**Robyn Matloff, MD**

**Molly Band, PA-C**





The Division of Pediatric Neurosurgery is committed to the following core values:

- We are dedicated to the delivery of comprehensive, compassionate, and timely family-centered care to our patients and families
- We collaborate with and respect all members of our regional community
- Through clinical research, we hope to develop new and better treatments for neurosurgical disease

**Patient Satisfaction**

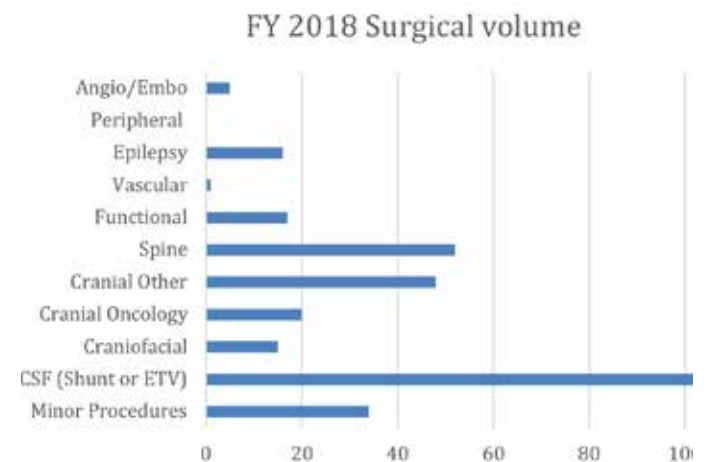
The Division of Neurosurgery is committed to providing outstanding service to our referring providers and families. Pediatric Neurosurgery received #1 status in 2018, with the highest level of patient and family satisfaction among all divisions at Connecticut Children's Medical Center.

**Quality Improvement Initiatives**

The division of Pediatric Neurosurgery remains committed to patient quality and safety. In addition to participation in the American College of Surgeons' Pediatric National Surgical Quality Improvement Program (NSQIP), the division's internal quality program continues to benchmark our performance against national standards. Coupled with our ongoing development of clinical pathways for patient care, we strive to provide outstanding care to our patients, families, and referring providers.

**Surgical Volume**

The Division of Pediatric Neurosurgery continues to provide the full spectrum of surgical care to the children of Western New England. In 2018, more than 300 children were provided surgical care by our expert team of providers.



**Quality Metrics**

	Connecticut Children's	National Benchmarks
Shunt failure, 90 days	17.6%	11.5% (30-day data) <sup>1</sup>
Shunt infection	1.2%	6% <sup>2</sup>
30 day readmission	9.1%	8.1% - 11.2% <sup>3,4</sup>

**Education and Research**

The Division of Neurosurgery remains committed to the mission of education and research. In cooperation with the University of Connecticut School of Medicine and Hartford Hospital, Connecticut Children's Medical Center is actively pursuing an application for hosting a neurosurgical residency program with the Accreditation Council for Graduate Medical Education.

Dr. Markus Bookland's basic science research, funded in part through grants from the Connecticut Brain Tumor Alliance, has been productive over the past year. Major publications were achieved on biomarkers for pediatric low grade glioma and 3D brain tissue modeling.

<sup>1</sup> Piatt JH. JNS Peds 14: 179-183, 2014.  
<sup>2</sup> Kestle JRW et al. JNS Peds 17: 391-396, 2016.  
<sup>3</sup> Wrubel DM et al. JNS Peds 13: 216-221, 2014.  
<sup>4</sup> Sherrod et al. JNS Peds 13: 350-362, 2016.



Efficacy and Safety of Two Trough-ranges of Everolimus as Adjunctive Therapy in Patients with Tuberous Sclerosis Complex (TSC) Who Have Refractory Partial-onset Seizures. Site Investigator: Francis DiMario, MD.

**DiMario FJ.** Tuberous sclerosis complex. In: Cabana MD, et al, editors. The 5-minute pediatric consult. 8th ed. Philadelphia, PA: Wolters-Kluwer Inc.; 2018.

**PUBLICATIONS**

Krossschell KJ, Kissel JT, Townsend EL, Simeone SD, Zhang RZ, et al., (**Acsadi G**, 9/21). Project Cure SMA Investigator's Network. Clinical trial of L-carnitine and valproic acid in spinal muscular atrophy type I. Muscle Nerve. 2018 Feb; 57(2):193-9.

Mandarakas MR, Menezes MP, Rose KJ, Shy R, Eichinger K, et al., (**Acsadi G**, 19/21). Development and validation of the Charcot-Marie-Tooth Disease Infant Scale. Brain. 2018 Nov 22. doi: 10.1093/brain/awy280. [Epub ahead of print]

Russell JA, Epstein LG, Bonnie RJ, Conwit R, **Graf WD**, Kirschen M, et al. Lawful physician-hastened death: AAN position statement. Neurology. 2018 Feb 27; 90(9):420-2.

*Book Chapters*

**DiMario FJ.** Tuberous sclerosis complex. In: Epocrates. London, England: BMJ; revision and update, 2018 July.

**STAFF**

**Gyula Acsadi, MD, PhD, FAAN, Division Head**

**Francis J. DiMario, Jr, MD**

**William D. Graf, MD, FAAN**

**Louisa Kalsner, MD**

**Jennifer Madan Cohen, MD**

**Elizabeth A. Ng, MD, FAAN**

**Mark Schomer, MD**

**Richard Young, MD**

**Edwin Zalneraitis, MD**

**Jeffrey Agli, APRN**

**Constandina Conley, APRN**





*The mission of the Pediatric Obesity Center is to be at the forefront of the care of families with obesity by providing innovative clinical service, cutting-edge research initiatives, and tailored education of the next generation of providers.*

### Clinical Growth

The year 2018 brought continued clinical growth for the Pediatric Obesity Center with significant increases in referrals to our program:

- 2018: 1,019 referrals
- 2017: 712
- 2016: 515
- 2015: 458

We increased the range of programs being offered and fully combined our teams – surgical (Drs. Christine Finck and Meghna Misra; and Nicole Boone, PA), medical (Drs. Priya Phulwani and Jessica Zimmerman), mental health (Obesity Center clinical director Dr. Melissa Santos) and nutrition (Hailey Beiner, RD) – to be able to offer comprehensive services to the families we serve. In the fall of 2018, the center welcomed Michael Reiss, PsyD, former psychology postdoctoral fellow in Connecticut Children's Pain and Palliative Care program, to provide further mental health services to the families in our program.

### Collaborations

Much of 2018 was spent preparing for our bariatric surgery program to apply for Center of Excellence status, a national accreditation that is challenging for adolescent programs to achieve. We formalized a collaboration with Hartford Hospital's Metabolic and Bariatric Surgery program, which allows us to offer full continuity of care from childhood to adulthood for individuals with obesity. We established a clinical pathway for the transition of patients between our programs. Lastly, our program was awarded a small grant from Hartford Hospital's surgical department to examine pain management in youth and adults pre- and post-bariatric surgery.

### Research and National Recognition

The Pediatric Obesity Center maintains 11 IRB-approved studies targeted at improving care for children and adolescents with obesity. Some notable achievements over the past year include three NIH submissions. Our team also gave four national conference workshop presentations. Drs. Finck and Santos presented at the Society of Pediatric Psychology Annual Conference, and our clinical team (Finck, Misra, Phulwani, Beiner and Santos) presented a lecture, "Management of Severe Pediatric Obesity: A Primer for the Practitioner," as part of the Connecticut Children's Continuing Medical Education (CME) Evening Lecture Series. Our program also presented five abstracts showcasing our collaborations with Connecticut

### PUBLICATIONS

**Bookland M**, Balarezo FS, Mandavili S. Rare congenital meningothelial hamartoma of the scalp with progressive growth. *Childs Nerv Syst*. 2018; June 18. [Epub ahead of print]

**Bookland M**, Tang-Schomer M, Gillan E, Komakova A. Circulating serum oncologic miRNA in pediatric juvenile pilocytic astrocytoma patients predicts mural nodule volume. *Acta Neurochir (Wien)*. 2018; June 18. [Epub ahead of print]

Assad M, Morgan S, Sink D, **Martin J**. Early recognition and management of fetal head trauma with massive subgaleal hemorrhage. *J Neonatal Perinatal Med*. 2018; Aug 21. [Epub ahead of print]

Tang-Schomer MD, Wu WB, Kaplan DL, **Bookland MJ**. In vitro 3D regeneration-like growth of human patient brain tissue. *J Tissue Eng Regen Med*. 2018; 12:1247-60.

**Martin JE**, Manning T, **Bookland M**, Castiglione C. Performance of minimally invasive sagittal synostectomy with supine patient positioning: technical note. *J Neurosurg Ped*. 2018; 22:344-47.

Goldstein HE, Neira JA, Banu M, Aldana PR, Braga B, Brockmeyer D, DiLuna ML, Fulkerson DH, Hankinson TC, Jea AH, Lew SM, Limbrick DD, **Martin J**, et al. Growth and alignment of the pediatric subaxial cervical spine following rigid instrumentation and fusion: a multicenter study of the Pediatric Craniocervical Society. *J Neurosurg Ped*. 2018; 22:81-8.

### STAFF

**Jonathan Martin, MD, FAANS, FACS, FAAP**,  
Division Head  
Associate Director of Trauma,  
Connecticut Children's Medical Center

**Markus Bookland, MD**  
Associate Director of Academic Affairs,  
Connecticut Children's Medical Center

**Paul Kanev, MD**

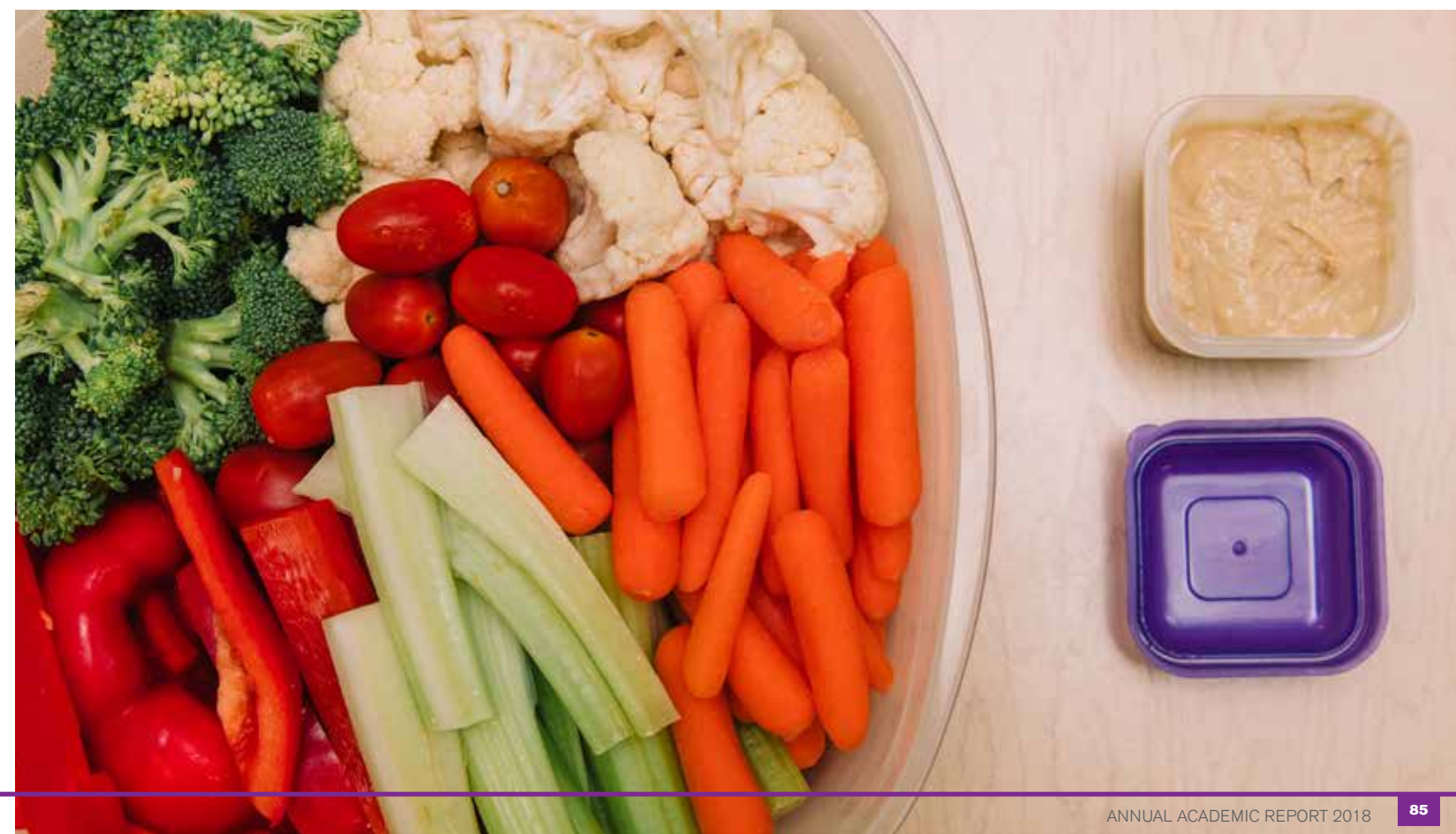
**Katie Kellerman, PA-C**  
**Allison Labelle, APRN**  
**Petronella Stolz, APRN, DNP**

#### Affiliated Faculty

**Eileen Gillan, MD, Neuro-oncology**  
**Mark Lee, MD, Orthopaedic Surgery**  
**Charles Castiglione, MD, Craniofacial Surgery**  
**Belachew Tessema, MD, Otolaryngology / Endonasal**

#### Sinus Surgery

**Marty Ollenschleger, MD,**  
Neurointerventional Radiology  
**Jennifer Madan-Cohen, MD, Epilepsy / Neurology**  
**Helaine Bertsch, MD, Radiation Oncology**







at Obesity Week, the international conference, which was held in Nashville, TN, in 2018. Two summer volunteers had a poster accepted at Obesity Week, and numerous other students are seeking advanced education in the area of obesity and nutrition.

### Summary

We are excited for continued growth and changes in 2019 as we continue to enhance the care we provide to the families we serve.

### PUBLICATIONS

Porter RM, Tindall A, Gaffka BJ, Kirk S, **Santos M**, Abraham-Pratt I, Gray J, Heckle D, Ward WL, Tucker JM, Sweeney B. A review of modifiable risk factors for severe obesity in children ages 5 and under. *Child Obes.* 2018 Oct; 14(7):468-76. doi: 10.1089/chi.2017.0344.

Gaffka BJ, Hassin SG, **Santos M**, Eneli I. Expert exchange workgroup on children age 5 and younger with severe obesity: provider observations of youth with early onset severe obesity in tertiary care obesity programs. *Child Obes.* 2018 Oct; 14(7):477-83. doi: 10.1089/chi.2018.0008.

**Santos M**, Finck C, Carroll C. Social media: finding its place in the medical world. *Conn Med.* 2018 Jun; 82(6):339-42.

Bernstein H, **Santos M**. Definitions of hunger and fullness among youth enrolled in a pediatric weight management program. *Clin Nutr ESPEN.* 2018 Feb; 23:167-70.

### STAFF

**Melissa Santos, PhD, Clinical Director,  
Obesity Center**

**Christine Finck, MD, FACS,  
Surgeon-in-Chief**

**Meghna Misra, MD, MS, FACS**

**Jessica Zimmerman, MD**

**Priya Phulwani, MD**

**Michael Reiss, PsyD**

**Hailey Beiner, RD**

**Nicole Boone, PA**

Children's Pain and Palliative program, as well as the work of our learners.

Dr. Santos continues to place the program on the national level with ongoing collaborations that remain from the program's participation in the Children's Hospital Associations' workgroup FOCUS on a Fitter Future. Dr. Santos is on the governance board of POWER (Pediatric Obesity Weight Evaluation Registry), the national registry for childhood obesity. She was elected to the board of directors for the Society of Pediatric Psychology, the major psychology organization for pediatric psychologists. She also was selected to join the editorial board of the journal *Eating Behaviors*.

### Education

Our center continued its mission to train the new generation of providers. Fourteen students rotated through the Obesity program under Dr. Santos for various research and clinical experiences. Our learners have made great contributions to the care we provide, and they have made an impact at the national level. Zachary Patinkin, MPH, an MD candidate in the class of 2019 at the Frank H. Netter, MD, School of Medicine at Quinnipiac University, had his poster on screening for obstructive sleep apnea receive a special recognition ribbon



*This is the first annual report of Connecticut Children's Medical Center's newest division: Ophthalmology. Connecticut Children's acquired the esteemed practice, Children's Eye Care, which was established more than 40 years ago with offices in Farmington and Glastonbury. Dr. Paul J. Rychwalski was recruited as the new division chief and joined current Connecticut Children's ophthalmologist Dr. Majida Gaffar in August 2018.*

The division is actively recruiting two to three additional physicians, an additional pediatric optometrist to complement Drs. Marnie Smith and Maria Varela, and a physician's assistant. Connecticut Children's Ophthalmology will maintain its two clinic sites in Farmington and Glastonbury with the former set to occupy new space adjacent to the Connecticut Children's Ambulatory Surgery Center in late 2019/early 2020. These moves will ensure excellent access to ophthalmology experts without lengthy waits or the need to refer outside the network for complex ophthalmic care.

A state-of-the-art ophthalmic surgical suite is being developed within the main campus operating rooms and at the Children's Ambulatory Surgery Center in Farmington. In addition, an ophthalmic diagnostic center is being assembled within the two outpatient clinic facilities. Intraocular surgery such as cataract extraction, intraocular lens implantation, anterior segment reconstruction and glaucoma operations will then be available at Connecticut Children's. Currently, children requiring these sight-saving operations must be sent outside of the Connecticut Children's family of hospitals. In the clinic, we are adding the

ability to perform swept-source optical coherence tomography (SS-OCT) for retina and optic nerve morphological analysis, virtually touchless intraocular pressure testing, wireless indirect ophthalmoscopy, advanced corneal topography and ectasia detection technology. In addition, we will offer visual electrophysiologic testing using technology that obviates the need for sedation and contact lens electrode placement on the eye.

Ophthalmology is a very important partner on the care team of our tiniest patients: babies born prematurely and being cared for in one of the Connecticut Children's neonatal intensive care units. As our colleagues in Neonatology, led by Dr. James Moore, use innovation and compassionate care to save the most vulnerable infants, it is important that the ophthalmology division provide robust support in screening and managing a devastating sequela of prematurity: retinopathy of prematurity (ROP). Our candidates for recruitment will be trained in ROP detection and treatment, and we will look to technology to assist in our surveillance of this ocular condition.

The Division of Ophthalmology has joined the Pediatric Eye Disease Investigator Group (PEDIG). PEDIG is an NIH-funded consortium of academic and private practice ophthalmologists and optometrists that develops and publishes large-scale clinical trials in ocular disease prevention and treatment.

### STAFF

**Paul J. Rychwalski, MD, Division Head**

**Majida Gaffar, MD**

**Marnie Smith, OD, Pediatric Optometrist**

**Maria Varela, OD, Pediatric Optometrist**



*The Orthopaedic Surgery Division consists of three services: The Pediatric-Orthopaedic service, the Sports Medicine service (Elite Sports Medicine), and the Center for Motion Analysis (CMA). Our team is made up of exceptional surgeons and physicians, PAs, APRNs, sports trainers and engineers with many years of extensive training and experience to provide our patients with quality care. We provide the full spectrum of care for children and young adults with orthopaedic conditions such as scoliosis and spinal deformities, limb deformity, congenital dislocated hips, clubfeet, congenital hand deformities, children's fractures as well as neuromuscular conditions such as cerebral palsy, spina bifida, and muscle diseases. Our Sports Medicine Division provides expert care for injured athletes as well as injury prevention programs.*

The Orthopaedic Surgery department has six fellowship-trained surgeons: division head Dr. Jeffrey Thomson, and Drs. Mark Lee, Phil Mack, Kristan Pierz (promoted this year to assistant professor), Janet Zahradnik, and Sonia Chaudhry. Our orthopaedic surgeons work closely with UConn Health and Maimonides Medical Center Orthopaedic residents who receive clinical and surgical experience. Our ACGME-accredited pediatric orthopaedic fellowship continues to train the upcoming generation

of Pediatric Orthopaedic surgeons. Our advanced practice providers, Bruce Bowman, PA-C, Amy Shannon, APRN, Marta Jablonski, PA-C, and Robin Bradshaw, APRN, continue to see the vast majority of the general orthopedic outpatient volume. Dr. Sonia Chaudhry was awarded the prestigious ASSH/AFSH 2018-2019 International Hand Surgery Fellowship to Ganga Hospital, Coimbatore, India. She will be completing this fellowship in early 2019. In December 2018, the Orthopedic Surgery Division moved into the newly designed 4th floor of the Bone & Joint Institute. The space features a state-of-the-art, kid- and family-friendly, outpatient office space. It also houses the EOS® X-ray Image System providing high quality, extremely detailed images at a significantly lower radiation dose compared to a typical radiographic X-ray.

The Sports Medicine Service (Elite Sports Medicine) has two sports medicine surgeons, Drs. Lee Pace and Jonathan Gelber, as well as two non-operative physicians, medical director Dr. David Wang, and Dr. Imran Hafeez. Four physician assistants, A.J. Ricciuti, PA, Kevin Fitzsimmons, PA, Nicole Cottle, PA, and Katelyn Colosi, PA, complement the team. The service provides sports medicine coverage for several high schools as well as Trinity College and Quinnipiac University sports teams. In addition, the sports medicine department continues to grow and has acquired HeadZone in Fairfield, CT, expanding Elite Sports Medicine's expertise in the clinical area of concussions to a broader demographic. This year, Dr. Pace performed the nation's first arthroscopic trochleoplasty procedure at our

surgery center in Farmington. The minimally invasive knee procedure is designed to correct trochlear dysplasia – a congenital malformation of the knee joint that affects the kneecap. Connecticut Children's is at the forefront in the treatment of this condition, which can limit mobility and a child's ability to take part in sports.

The Center for Motion Analysis, directed by Kristan Pierz, MD, and Sylvia Öunpuu, MSc, has achieved full accreditation by the Commission for Motion Laboratory Accreditation. The CMA provides a wide range of diagnostic services evaluating children with disorders that affect walking and which may require treatment including orthopedic surgical intervention. The Center for Motion Analysis also conducts research on disorders that impact gait such as Charcot-Marie-Tooth disease, cerebral palsy, and clubfoot, as well as sports injuries.

Our research efforts, led by Matthew Solomito, PhD, provide a robust program that this year resulted in 13 publications, 11 presentations, and 10 posters/e-posters.

## PUBLICATIONS

Mueske NM, **Öunpuu S**, Ryan DD, Healy BS, **Thomson J**, Choi P, Wren TAL. Impact of gait analysis on pathology identification and surgical recommendation in children with spina bifida. *Gait Posture*. 2018 Oct 9;67:128-32. doi: 10.1016/j.gaitpost.2018.10.003. [Epub ahead of print]

Singh H, **Lee MC**, **Solomito MJ**, Merrill C, Nissen CW. Lumbar hyperextension in baseball pitching: a potential cause of spondylolysis. *J Appl Biomech*. 2018 May 29;1-19. doi: 10.1123/jab.2017-0230. [Epub ahead of print]

**Solomito MJ**, **Kostyun RO**, Wu YH, Mueske NM, Wren TAL, Chou LS, **Öunpuu S**. Motion analysis evaluation of adolescent athletes during dual-task walking following a concussion: a multicenter study. *Gait Posture*. 2018 Jul; 64:260-65. doi: 10.1016/j.gaitpost.2018.06.165. Epub 2018 Jun 25.

**Solomito MJ**, Garibay EJ, Nissen CW. A biomechanical analysis of the association between forearm mechanics and the elbow varus moment in collegiate baseball pitchers. *Am J Sports Med*. 2018 Jan;46(1):52-7. doi: 10.1177/0363546517733471. Epub 2017 Oct 12.

**Gelber JD**, Soloff L, Schickendantz MS. The thrower's shoulder. *J Am Acad Orthop Surg*. 2018 Mar 15;26(6):204-13.

**Pierz KA**. Neuromuscular disorders in children. (Section 6 Pediatrics, Chapter 63). In: Grauer J, editor-in-chief; Smith BG, Sharkey M, section editors. *Orthopaedic knowledge update* 12.



Rosemont, IL: American Academy of Orthopaedic Surgeons; 2017. p. 835-51.

**Öunpuu S, Pierz K**. Hereditary motor sensory neuropathy: understanding function using motion analysis. In: Mueller B, Wolf SI, Brueggemann GP, Deng Z, McIntosh A, Miller F, Selbie WS, editors. *Handbook of human motion*. Springer International. [ISBN: 978-3-319-30808-1]

## STAFF

**Jeffrey D. Thomson, MD, Division Head**

**Sonia Chaudhry, MD**  
**Jonathan Gelber, MD**  
**Imran Hafeez, MD**  
**Mark C. Lee, MD**  
**Philip W. Mack, MD**  
**Lee Pace, MD**  
**Kristan Pierz, MD**  
**David Wang, MD**  
**Janet Zahradnik, MD**

**Bruce E. Bowman, PA-C, DFAAPA**  
**Robin Bradshaw, APRN, ONC**  
**Nicole Cottle, PA-C**  
**Katelyn Colossi, PA-C**  
**Kevin Fitzsimmons, PA-C**  
**Marta Jablonski, PA-C**  
**Sylvia Öunpuu, MSc**  
**A.J. Ricciuti, PA-C**  
**Amy Shannon, APRN**  
**Matthew Solomito, PhD, Research Director**

## Fellows

**Alvin Su, MD**  
**Fred Xavier, MD**







*Since the founding of the Division of Otolaryngology – Head and Neck Surgery in 1999, we have expanded our clinical services. In the last fiscal year, Connecticut Children’s Specialty Group Division of Otolaryngology performed 2,323 surgeries and 12,816 outpatient visits.*

Dr. Christopher Grindle continues in his stellar quality and safety initiatives. He has refined the tonsillectomy perioperative pathway with improved efficiency for families, providers and the nursing staff.

Under the direction of Nicole Murray, MD, the Connecticut Children’s Aerodigestive Team (CCAT) has expanded services both in Hartford and at our Farmington location to improve access and timeliness of care. The team includes Otolaryngology – Head and Neck Surgery, Pulmonary Medicine, Gastroenterology, and Speech Language Pathology. This specialty clinic has become very popular for families whose members are able to obtain comprehensive aerodigestive care for their children including collaboration with our Speech Language Pathology colleagues in performing functional endoscopic evaluation of swallowing (FEES). In addition to her work on the Aerodigestive Team, Dr.

Murray was an invited speaker on “The Altered Airway” at the Global Tracheostomy Collaborative in November 2018, and she taught the pediatric component of the first United States session of the international course.

Dr. Katie Kavanagh, the simulation education director for the University of Connecticut Otolaryngology residency, presented her simulation research at several national and international meetings. She was an invited simulation instructor at Boston Children’s Hospital and Johns Hopkins, and served as a speaker on an instructional simulation panel in Stockholm, Sweden.

Drs. Kavanagh and Murray hosted the American Academy of Otolaryngology – Head and Neck Surgery (AAO-HNS) and had its past-president, Dr. Sujana Chandrasekhar, as guest speaker at the annual Connecticut Women in Otolaryngology meeting.

Clinically, both Dr. Grindle and division head Dr. Scott Schoem have expanded their surgical practice of endoscopic middle ear surgery thereby minimizing operative time, decreasing healing time and reducing cholesteatoma recurrence.

On the research front, Drs. Grindle and Schoem, in collaboration with Dr. Nicholas Bennett from Infectious Diseases, have established Connecticut Children’s as a site for an NIH-sponsored,

multi-institutional study examining the effectiveness of valganciclovir to arrest congenital hearing loss caused by cytomegalovirus (CMV).

Dr. Schoem is currently editing the 2nd edition of *Pediatric Otolaryngology for Primary Care*, published by the American Academy of Pediatrics for pediatricians and family practice. Drs. Murray and Grindle have contributed chapters for the newest edition.

The division is pleased to announce two new physician hires in 2019. Dr. Nancy Grover will join our practice in April 2019. She trained at Rady Children’s Hospital in San Diego for her pediatric otolaryngology fellowship. Our previous UConn otolaryngology graduate, Dr. Amy Lawrason Hughes, will join us in August 2019. She performed her fellowship at Boston Children’s and is currently employed there.

**PUBLICATIONS**

**Murray N, Valdez TA, Hughes AL, Kavanagh KR.** Teaching a tracheotomy handoff tool to pediatric first responders. *Int J Pediatr Otolaryngol.* 2018; 114:120-3.

**Valdez TA, Carr JA, Kavanagh KR, Schwartz M, Blake D, Bruns O, Bawendi M.** Initial findings of shortwave infrared otoscopy in a pediatric population. *Int J Pediatr Otolaryngol.* 2018; 114:15-9.

**Cote V, Schwartz M, Arbouin Vargas JF, Canfarotta M, Kavanagh KR, Hamdan U, Valdez TA.** 3-Dimensional printed haptic simulation model to teach incomplete cleft palate surgery in an international setting. *Int J Pediatr Otolaryngol.* 2018; 113:292-7.

**Kavanagh KR, Spiro J.** Faculty wellness: educator burnout among otolaryngology graduate medical educators. *Otolaryngol Head Neck Surg.* 2018; 158(6):991-4.

Schwartz MA, **Kavanagh KR, Frampton SJ, Bruce IA, Valdez TA.** Using simulators to teach pediatric airway procedures in an international setting. *Int J Pediatr Otolaryngol.* 2018; 104:178-81.

Bentivegna KC, Borrup KT, Clough ME, **Schoem SR.** Basic choking education to improve parental knowledge. *Int J Pediatr Otolaryngol.* 2018; 113:234-9.

Firriolo JM, Nuzzi LC, **Schmidtberg LC, Lobow BI.** Perioperative ketorolac use and postoperative hematoma formation in reduction mammoplasty: a single surgeon experience of 500 consecutive cases. *Plast Reconstr Surg.* 2018; 142(5): 632e-8e.

Shah MU, Sohal M, **Valdez TA, Grindle CR.** iPhone otoscopes: currently available, but reliable for tele-otoscopy in hands of parents? *Int J Pediatr Otolaryngol.* 2018; 106:59-63.

**Book Chapter**

**Schoem SR, Rosbe KW, Lee ER.** Aerodigestive foreign bodies and caustic ingestions. In: Cummings otolaryngology head neck surgery, 7th ed. Philadelphia: Elsevier Saunders; 2018.

**STAFF**

**Scott Schoem, MD, Division Head**  
Co-director, Cochlear Implant Program

**Christopher Grindle, MD**  
Co-director, Cochlear Implant Program

**Katie Kavanagh, MD**  
Director of Research  
Director, Medical Simulation  
Director, Otolaryngology Residency Program

**Nicole Murray, MD**  
Site Director, Otolaryngology Residency Program  
Director, Aerodigestive Team

**Rebecca Strong, APRN**  
**Christine Harrington, PA-C**  
**Lauren Schmidtberg, PA-C**  
**Morgan Denno, APRN**  
**Elizabeth Oblon, APRN**





*The mission of the Pain and Palliative Medicine Division is to utilize our multidisciplinary expertise to alleviate pain and stress in children afflicted with acute, chronic or terminal illness.*

Highlighting our year has been the addition of new faculty members Richelle deMayo, MD, and Timothy LaVigne, PhD. Dr. deMayo is well known as the chief medical informatics officer for Connecticut Children's but is spearheading the development of our Headache Clinic. She became board certified in Headache Medicine this year. Dr. LaVigne completed his PhD in psychology at the University of Vermont and joins us after completing his postdoctoral fellowship at Boston Children's Hospital.

Several other innovations got off the ground in 2018. We opened our chronic headache program under the direction of Drs. deMayo and LaVigne. The clinic seeks to combine cutting-edge headache interventions with biobehavioral care to improve the lives of children suffering with chronic headache.

We also began our virtual reality program. A philanthropic donation provided 10 virtual reality goggles to be used across the institution to reduce procedural pain.

**Other important highlights and milestones for the division in 2018:**

Dr. Kalyani Raghavan earned the title of a certified yoga therapist from the International Association of Yoga Therapists.

Dr. Clare Riotte was named Volunteer Physician of the Year by the University of Connecticut School of Medicine.

Division head Dr. William Zempsky served on an FDA American Society of Hematology Panel on core outcomes in sickle cell disease. He also participated in an American Society of Hematology initiative to develop evidence-based guidelines in sickle cell disease.

**Ongoing Grants**

NIH/NIAMS R01 AR070474-01A1 – Kashikar-Zuck S. Multisite randomized clinical trial of FIT Teens for juvenile fibromyalgia. (Active: 06/21/2017 – 05/30/2022) Site PI: **Jessica Guite, PhD.** Co-Investigators: **Dr. William Zempsky, Dr. Emily Wakefield.**

M1 Mentoring Program – Connecticut Institute for Clinical and Translational Science. (Active: 07/1/2017- 06/30/2020) PI: **Dr. William Zempsky.**

NIH/NICHHD R01HD086978-01A1 – ICanCope with Sickle Cell Disease. Co-Investigator: **Dr. William Zempsky.**

**PUBLICATIONS**

Field JJ, Ballas SK, Campbell CM, Crosby LE, Dampier C, Darbari DS, McClish DK, Smith WR, **Zempsky WT.** AAAPT diagnostic criteria for acute sickle cell disease pain. J Pain. 2018 Dec 19. pii: S1526-5900(18)31017-4. doi: 10.1016/j.jpain.2018.12.003. [Epub ahead of print]

Palermo TM, **Zempsky WT,** Dampier CD, Laloo C, Hundert AS, Murphy LK, Bakshi N, Stinson JN. iCanCope with sickle cell pain: design of a randomized controlled trial of a smartphone and web-based pain self-management program for youth with sickle cell disease. Contemp Clin Trials. 2018 Nov;74:88-96. doi: 10.1016/j.cct.2018.10.006.

Palermo TM, Dudeney J, Santanelli JP, Carletti A, **Zempsky WT.** Feasibility and acceptability of internet-delivered cognitive behavioral therapy for chronic pain in adolescents with sickle cell disease and their parents. J Pediatr Hematol Oncol. 2018 Mar; 40(2):122-7.

**Riotte CO,** Kukora SK, Keefer PM, Firn JI. Identifying the types of support needed by interprofessional teams providing pediatric end-of-life care: a thematic analysis. J Palliat Med. 2018 Apr; 21(4):422-7. doi: 10.1089/jpm.2017.0331.

**Wakefield EO, Zempsky WT,** Puhl RM, Litt MD. Conceptualizing pain-related stigma in adolescent chronic pain: a literature review and preliminary focus group findings. Pain Rep. 2018; 3:1-7. doi:10.1097/PR9.0000000000000679.

**Wakefield EO,** Pantaleao A, Popp JM, Dale LP, Santanelli JP, Litt MD, **Zempsky WT.** Describing perceived racial bias among youth with sickle cell disease. J Pediatr Psychol. 2018 Mar 17. doi: 10.1093/jpepsy/jsy015.

**Wakefield EO,** Kutner EC. Improving adherence in pediatric chronic pain. Topics in Pain Management. 2018; 33(10), 1–8. https://doi.org/10.1097/01.TPM.0000532713.05830bc.

**STAFF**

**William T. Zempsky, MD, MPH, Division Head**

- Richelle deMayo, MD**
- Timothy LaVigne, PhD**
- Eapen Mathew, MD**
- Kerry Moss, MD**
- Clare Riotte, DO**
- Kalyani Raghavan, MD**
- Emily Wakefield, PsyD**

- Taryn Hamre, APRN, DNP**
- Kim Kempner, APRN**

*In 2018, the Department of Pathology and Laboratory Medicine continued its mission of providing the highest quality laboratory services through excellence, innovation, integrity and concern for quality care provided to patients.*

Although the majority of the members within the department provide services in Anatomic Pathology, there is a wide range of sub-specialization within that division. The MD/PhD staff in Anatomic Pathology has sub-specialization in Neuropathology, Cytopathology, Pediatric Pathology, Molecular Pathology and Dermatopathology. Additional members within Anatomic Pathology have specialty skills in organ systems for which there is no board certification. These include breast pathology, GI pathology, GU pathology, Gyn pathology, pulmonary pathology, head and neck pathology, and soft tissue tumors. Additionally there are several members of the department board certified in Hematopathology, providing support in Hematology and Hematopathology. Other staff members provide support in Transfusion Medicine. There also are PhD board-certified members in the following disciplines: Microbiology, Chemistry, Molecular Pathology/Cytogenetics and Immunopathology.

**Trends**

Implementation of newer molecular diagnostics, newer diagnostic assays, automation, and consolidation all are happening in many laboratories. Larger academic centers and those with cancer centers are implementing Next-generation Sequencing (NGS) assays to support targeted therapy and offer enhancement in diagnostic panels.

Physician-owned labs continue to open, and we have seen that trend in our region, too.

**Education**

The department remains committed to teaching the next generation of pathologists. We have residencies in AP/CP Pathology and fellowship positions that continue to be filled by highly qualified candidates. Graduates from the program continue to be successful in obtaining additional competitive fellowships and subsequently attaining attractive jobs.

**The Future**

Renovations in the histology lab were completed, and it opened early in 2018. The space also includes the immunohistochemistry lab, which allows us to evaluate consolidation of services across the Hartford HealthCare laboratories. To that end, a standardization committee has formed to include members from all HHC anatomic pathology labs. Standardization in Microbiology is ongoing, and space at Hartford Hospital is being evaluated for renovation and consolidation of microbiology services.

**PUBLICATIONS**

Del Carmen Huesca-Espitia L, **Aslanzadeh J,** Feinn R, Joseph G, Murray TS, Setlow P. Deposition of bacteria including potential pathogens and spore formers by bathroom hand dryers. Applied Environ Microbiol. 2018 Feb 9. pii: AEM.00044-18. doi: 10.1128/AEM.00044-18. [Epub ahead of print]

Sharma I, Cho WC, Thaker S, Jensen T, **Balarezo F,** Weiss R, Finck C. Solid pseudopapillary neoplasm of the pancreas. J Pediatr Surg Case Rep. 2018; 37:63-9. doi: 10.1016/j.epsc.2018.07.024.

Cho WC, **Balarezo F.** Expression of CD34 and beta-catenin in malignant rhabdoid tumor of the liver mimicking proximal-type epithelioid sarcoma. J Pathol Transl Med. 2018 May; 52(3):195-7. Epub 2017 Jul 7. PMID: 28683521.

Easwar A, Middleton D, **Ligato S.** Cytological diagnosis of duodenal gangliocytic paraganglioma on ultrasound-guided fine needle aspiration: a case report with review of the literature. Int J Pathol Clin Res. 2018 May 26.

Bookland M, **Balarezo FS, Mandavilli S.** Rare congenital meningotheial hamartoma of the scalp with progressive growth. Child's Nerv Syst. 2018 June 18. doi: 10.1007/s00381-018-3866-y. [Epub ahead of print]

Cho WC, Ramlal B, **Fiel-Gan M, Song X.** Rare manifestation of Churg-Strauss Syndrome with mediastinal lymphadenopathies: report of an autopsy case. J Pathol Transl Med. 2019 Jan; 53(1):66-9. doi: 10.4132/jptm.2017.12.13. Epub 2017 Dec 18.

Cecilia Cerana M, Considine B, **Song X,** Killory BD. Solitary brain metastasis as initial presentation of ovarian carcinoma: a case report and literature review. Conn Med. 2018 Mar; 82(3):145-8.

**STAFF**

**Srinivas Mandavilli, MD, Department Chief**  
**Fabiola Balarezo, MD, Director, Pediatric Pathology**

- Jaber Aslanzadeh, PhD**
- Richard Cartun, MS, PhD**
- Joseph A. DiGiuseppe, MD, PhD**
- Jonathan Earle, MD**
- Torsten Ehrig, MD**
- Mary Fiel-Gan, MD**
- Saverio Ligato, MD**
- Gregory S. Makowski, PhD, DABCC, FACB**
- Richard Muller, MD**
- William Rezuze, Jr., MD**
- Andrew Ricci, MD**
- Bradford Sherburne, MD**
- Xianyuan Song, MD/PhD**



In the year 2018, Dr. Alan Babigian continued his time as the president of the Connecticut Society of Plastic and Reconstructive Surgeons. Division head Dr. Charles Castiglione co-edited a textbook, *Complications in Maxillofacial Cosmetic Surgery*, which was released in print in January 2018. Two of the division's trainees were accepted into Plastic Surgery residency programs, and three more applied for next year.

The Plastic Surgery Department provides clinical services at the Connecticut Children's Medical Center and at Hartford Hospital. Our surgical volume has remained stable, and includes all types of plastic and reconstructive procedures. Our plastic surgeons frequently collaborate with other surgical specialists, providing state-of-the-art multidisciplinary surgical care. Common surgical procedures performed include complex wound closures including flaps and grafts, craniofacial reconstruction, craniofacial fracture repair, cleft lip/palate reconstruction, breast surgery/reconstruction, body contouring, skin/soft tissue tumor excision/repair, upper extremity/hand surgery/reconstruction, and cosmetic surgery/non-surgical cosmetic procedures.

The multidisciplinary Craniofacial Team at Connecticut Children's, co-directed by Dr. Castiglione of Plastic Surgery and Dr. Paul Kanev of Pediatric Neurosurgery, remains a center of excellence. The team provides comprehensive evaluation and treatment for patients of all ages with congenital or acquired deformities of the head and neck. Active team members come from many disciplines, including Plastic Surgery, Pediatric Neurosurgery, Pediatric Otolaryngology, Pediatric Dentistry, Orthodontics, Oral and Maxillofacial Surgery, Pediatric Development, Social Work, and Speech and Language Pathology. Surgeries for cleft lip and palate are the most common. Craniosynostosis reconstruction, performed by Dr. Castiglione of Plastic Surgery, and Drs. Kanev, Jonathan Martin, and Markus Bookland of Pediatric Neurosurgery, are also common. In addition, the multidisciplinary Craniofacial Trauma Team, under the leadership of Drs. Castiglione and Norman Cavanagh, provides cutting edge treatment for all craniomaxillofacial injuries at both Connecticut Children's and Hartford Hospital.

Five plastic surgeons, Drs. Duff Ashmead, Alan Babigian, David Bass, James Piorkowski, and Steven Smith, are fellowship-trained hand surgeons, and perform all types of upper extremity and hand surgery. This includes trauma surgery, and reconstruction for acquired and congenital deformities. These surgeons also provide the majority of coverage for hand call at Hartford Hospital and Connecticut Children's.

Plastic surgeons are very involved in volunteer activities including surgical mission trips. Drs. Babigian and Castiglione travel to Ecuador and perform many surgeries including burn reconstruction, hand surgery, ear reconstruction, and cleft lip/palate surgeries. Dr. Babigian is director of the Global Health Program at Hartford Hospital.

Education is a large component of the Plastic Surgery Department's activities. Residents from General Surgery, Orthopaedic Surgery, Urology, ENT, Oral and Maxillofacial Surgery, and Emergency Medicine rotate on the service. Medical students also elect rotations on Plastic Surgery. Active teaching occurs during daily patient rounds, in the clinic/office setting, in the emergency room, in the operating room, and during planned teaching conferences. Several residents and medical students have expressed interest in a career in plastic surgery, and one resident and one student matched at premier plastic surgery residency programs in the past year. This brings the total to 53 of our residents and students who have moved on to Plastic Surgery since 1988 when Dr. Castiglione began practicing here. Several residents and medical students are involved in research projects with Drs. Babigian and Castiglione. In addition to publishing, Drs. Babigian and Castiglione have presented papers locally and regionally. Three presentations/posters were given at the 2018 annual meeting of the American Cleft Palate Association. Dr. Castiglione is the plastic surgery editor for *Connecticut Medicine: the Journal of the Connecticut State Medical Society*, and a reviewer for three journals: the *American Journal of Cosmetic Surgery*, *Craniofacial Trauma & Reconstruction*, and the *Journal of Oral and Maxillofacial Surgery*. Some department members are involved in local, regional and national professional societies. Drs. Castiglione and Delucia are members of the executive council of the Connecticut Society of Plastic and Reconstructive Surgeons, and Dr. Babigian is president. Drs. Babigian and Castiglione are members of the executive council of the New England Society of Plastic and Reconstructive Surgery.

In 2019, we look forward to the arrival of Dr. Christopher Hughes. He will join the division in August following completion of a Craniofacial Fellowship at Boston Children's Hospital. Dr. Hughes graduated from Boston College, earned an MPH from Yale, and a medical degree from Loyola University. He completed five years of a Pediatric Surgery residency at UConn, and two years of Global Health research and three years of Plastic Surgery residency at Harvard.

## PUBLICATIONS

Castillo R, Sheth K, **Babigian A**, Scola C. Recurrent carpal tunnel syndrome following surgical release associated with anatomical



extension of the forearm flexor muscle bellies into the carpal tunnel. *Arch Plast Surg*. 2018;45(5):474-8.

Ferneini E, **Castiglione C**, Banki M, co-editors. *Complications in maxillofacial cosmetic surgery*. Springer; 2018 Jan.

Farshidi F, Sood A, **Castiglione C**. *Complications of rhinoplasty*. In: *Complications in maxillofacial cosmetic surgery*. Springer; 2018 Jan.

Vega D, Tarabishy S, Wood J, **Castiglione C**. *Complications associated with rhytidectomy (facelift surgery): avoidance and correction*. In: *Complications in maxillofacial cosmetic surgery*. Springer; 2018 Jan.

Ferneini E, Beauvais D, **Castiglione C**. *Antibiotics in rhytidectomy surgery: evidence-based recommendations*. *Conn Med*. 2018 May; 82(5): 271-5.

## STAFF

**Charles L. Castiglione, MD, MBA, FACS,**  
Department Chief

**Brian Allen, MD**  
**Duffield Ashmead, MD**  
**Alan Babigian, MD**  
**David Bass, MD**  
**Alex Cech, MD**  
**Orlando Delucia, MD**  
**James Piorkowski, MD**  
**Steven Smith, MD**

*Hartford HealthCare Medical Group staff:*

**Mindi Cieck, APRN**  
**M. Eileen Auclair, PA-C**  
**Paul C. Polzella, PA-C**



*Our mission is consistent with Connecticut Children's: to improve the physical and emotional health of children. Our primary model to improve clinical care is through embedding psychological treatment in the care provided by subspecialty divisions. Many children's hospitals use this approach to promote coping and positive outcomes for children with chronic illnesses. Integrating psychological treatment with medical care has been shown to produce positive outcomes.*

The division continues to expand. Over the last year we added another full-time psychologist, Dr. Timothy LaVigne, to work in the Pain and Palliative Division, and a full-time psychologist, Dr. Lauren Ayr-Volta, joined the Hematology-Oncology Division. Dr. Ayr-Volta is also a trained neuropsychologist, which will provide patients, especially those with brain tumors, with better access to this important evaluation. Dr. Michael Reiss, who completed his fellowship year with the Pain Division, is now working part-time in the Weight Management Program. The Hematology-Oncology Division also welcomed another full-time psychologist, Dr. Siddika Mulchan, who moved to Connecticut from Florida.

These developments have been well received and supported by the hospital community, and we anticipate continued growth to patient populations that will benefit from psychological and behavioral health as part of their medical treatment.

The 2018-2019 training year includes two 12-month Psychology Fellowships, in the Pain and Palliative Care Division and inpatient Child Psychiatry Consultation/Liaison. Fellows provide advanced clinical treatment and receive additional training in research. We continue to train three Psychology pre-doctoral interns each year in inpatient and outpatient settings through our collaboration with the Institute of Living's Academic Pediatric Association-approved training programs. All psychologists in the Pediatric Psychology Division provide teaching and supervision to these learners, as well as participate in continuing education for medical providers and learners.

Over the last year, our division has become an additional collegial home for psychologists working in primary care in East and West Hartford offices. Their work is made possible by a grant shared by Connecticut Children's and the Village for Children and Families. Integrating behavioral health care in primary care settings is a growing trend across the country.

In addition to major publications, all members of the Division of Pediatric Psychology are active in presenting posters and presentations at national clinical and research meetings, and they are involved in academic and advocacy roles. A few highlights include:

- Bradley Jerson, PhD, was elected as clinical member-at-large for the Pediatric GI Special Interest Group of the Society of Pediatric Psychology.
- Lynelle Schneeberg, PsyD, presented at numerous Lunch & Learn sessions on sleep problems in children. She is frequently a media consultant on sleep problems, and has made appearances on NBC Connecticut and Fox 61. She also is a frequent contributor to blogs and podcasts.
- Melissa Santos, PhD, was elected to the board of directors for the Society of Pediatric Psychology. She also was selected to join the editorial board of the journal *Eating Behaviors*.

## PUBLICATIONS

Porter R, Tindall A, Gaffka B, Kirk S, **Santos M**, Abraham-Pratt I, et al. A review of modifiable risk factors for severe obesity in children ages 5 and under. *Child Obes*. 2018 Oct; 14(7):468-76. doi: 10.1089/chi.2017.0344. Epub 2018 Aug 29.

Gaffka B, Hassin, S, **Santos M**, Eneli I. Expert exchange workgroup on children age 5 and younger with severe obesity: provider observations of youth with early onset severe obesity in tertiary care obesity programs. *Child Obesity*. 2018 Oct; 14(7):477-83. doi: 10.1089/chi.2018.0008. Epub 2018 Aug 29.

**Santos M**, Finck C, Carroll C. Social media: finding its place in the medical world. *Conn Med*. 2018 Jun; 82(6):339-42.

Bernstein H, **Santos M**. Definitions of hunger and fullness among youth enrolled in a pediatric weight management program. *Clin Nutr ESPEN*. 2018 Feb; 23:167-70.

**Wakefield EO**, Zempksy WT, Puhl RM, Litt MD. Conceptualizing pain-related stigma in adolescent chronic pain: a literature review and preliminary focus group findings. *Pain Rep*. 2018 Sep; 3(Suppl 1):e679. doi:10.1097/PR9.0000000000000679.

**Wakefield EO**, Pantaleao A, Popp JM, Dale LP, Santanelli JP, Litt MD, Zempksy WT. Describing perceived racial bias among youth with sickle cell disease. *J Pediatr Psychol*. 2018; 2018 Aug 1;43(7):779-788. doi: 10.1093/jpepsy/jsy015.

**Wakefield EO**, Kutner EC. Improving adherence in pediatric chronic pain. *Topics in Pain Management*. 2018 May; 33(10):1-8. <https://doi.org/10.1097/01.TPM.0000532713.05830.bc>.

## STAFF

**Barbara Rzepski, PhD, Division Head**

**Lauren Ayr-Volta, PhD**

**Bradley Jerson, PhD**

**Timothy Lavigne, PhD**

**Christine Nunes, PsyD**

**Michael Reiss, PsyD**

**Melissa Santos, PhD**

**Lynelle Schneeberg, PsyD**

**Emily Wakefield, PsyD**

## Fellows

**Elyse Rosenberg, PhD, Consultation/Liaison**

**Preeti Sandhu, PsyD, Pain and Palliative Division**





*The Division of Pulmonary Medicine strives to be a comprehensive regional resource for pediatric pulmonary disease, with commitments to expert patient care, patient and professional education, and clinical and basic research. This year's highlights include expansion of our Pediatric Sleep Center, Severe Asthma Program, and multidisciplinary Aerodigestive Program, and identification of our Cystic Fibrosis Newborn Screening Program as the best in the country.*

The Division of Pulmonary Medicine provides care for infants, children and adolescents with a variety of pulmonary diseases including asthma, apnea, bronchopulmonary dysplasia, cystic fibrosis, interstitial lung disease, neuromuscular disease, respiratory sleep disorders, and chronic respiratory failure. The division oversees a state-of-the-art pulmonary function laboratory that is capable of performing spirometry, body plethysmography, impulse oscillometry, methacholine challenge, cardiorespiratory adaptation, and exercise provocation testing in children. Simple spirometry and bronchodilator assessment also are performed at our satellite clinics.

Our Pediatric Sleep Center has grown under the leadership of Dr. Jay Kenkare to over 2,000 studies annually done at three sites in Hartford, Farmington, and Glastonbury. Our Behavioral Sleep Medicine program led by Dr. Lynelle Schneeberg continues to add tremendous value for our patient families and referring providers. Dr. Greg Morgan, a board-certified neurologist and sleep medicine specialist, continues to add his expertise in sleep study interpretation. The Severe Asthma Program takes an ecologic approach to children with asthma, combining intensive asthma education, medication adherence monitoring, communication with the school nurse, and screening by a care coordinator for additional resources and needs. We have successfully demonstrated a decrease in hospitalizations, emergency room visits and asthma exacerbations through enrollment in the program. The Aerodigestive Program, a multi-specialty venture with Gastroenterology, Otolaryngology, and Speech Therapy, also continues to grow with increased clinics and joint endoscopy procedures. Other specialty clinics include a joint Sickle Cell Pulmonary Clinic with Hematology-Oncology, a Severe Asthma Clinic, and the Central Connecticut Cystic Fibrosis Center. Our pediatric Cystic Fibrosis (CF) program is a national Top 10 center for patients being seen by multidisciplinary team members, and our CF Newborn Screening Program is ranked No. 1 nationally by the Cystic Fibrosis Foundation for the lowest median age for diagnosis of CF in infants with positive newborn screening.

Members of the division contribute to the education of medical students and residents, respiratory therapists, and nursing APRN

students from Yale. Division head Dr. Craig Schramm is a member of the University Center for Excellence in Developmental Disabilities at the University of Connecticut Health Center. Dr. Tregony Simoneau, director of our Severe Asthma Program, is principal investigator of a Patterson Trust Mentored research award for a collaborative research study with Jackson Laboratories for Genomic Medicine in Farmington, CT, on the identification of long non-coding RNA biomarkers in allergic asthma. She has received a Cigna Foundation Grant to create electronic versions of the evidence-based Easy Breathing© and Easy Breathing for Schools programs in an effort to provide integrated care that is easier for clinicians to utilize. Dr. Simoneau is also site-PI for two NIH-funded multicenter studies: Controlling and Preventing Asthma Progression and Severity in Kids (CASK), and Preventing Asthma in High-Risk Kids (PARK). Our Cystic Fibrosis Center director, Dr. Craig Lapin, serves on the Cystic Fibrosis Foundation Partnership of Care Committee, and center co-director Dr. Melanie Collins is the Connecticut representative to the Cystic Fibrosis Foundation Special Interest Group on newborn screening.

Clinical research projects conducted over the past year included participation in multicenter trials looking at long-term effectiveness and safety of lumacaftor/ivacaftor and at patient-reported gastrointestinal symptoms in patients with cystic fibrosis. Collaborative research projects focused on microbiological research in cystic fibrosis with Quinnipiac Medical School, and weaning of supplemental oxygen in infants with bronchopulmonary dysplasia with Boston Children's Hospital. Additional basic science research addressed microbiome modulation of airway immunological tolerance with the Department of Immunology and microRNA expression in asthmatic airways with the Jackson Laboratory.

**PUBLICATIONS**

Adami AJ, Bracken SJ, Guernsey LA, Rafti E, Maas KR, Graf J, Matson AP, Thrall RS, **Schramm CM**. Early-life antibiotics attenuate regulatory T cell generation and increase the severity of murine house dust mite-induced asthma. *Pediatr Res*. 2018 Sep; 84(3):426-34. doi: 10.1038/s41390-018-0031-y.

Bracken SJ, Adami AJ, Rafti E, **Schramm CM**, Matson AP. Regulation of IgE activity in inhalational tolerance via formation of IgG anti-IgE/IgE immune complexes. *Clin Mol Allergy*. 2018 May 18; 16:13. doi: 10.1186/s12948-018-0091-x. eCollection 2018.

**Collins MS**, O'Brien M, **Schramm CM**, Murray TS. Repeated hot water and steam disinfection of Pari LC Plus® nebulizers alter nebulizer output. *J Cyst Fibros*. 2018 Sep 14. pii: S1569-1993(18)30753-7. doi: 10.1016/j.jcf.2018.08.005. [Epub ahead of print]



Hollenbach J, Villarreal M, **Simoneau T**, Langton C, Mitchell H, Flores G, Cloutier M, Szeffler S. Inaccuracy of asthma-related self-reported health-care utilization data compared to Medicaid claims. *J Asthma*. 2018 Sep 25: 1-4. doi: 10.1080/02770903.2018.1502302.

Kuti JL, Pettit RS, Neu N, Cies JJ, **Lapin C**, Muhlebach MS, Novak KJ, Nguyen ST, Saiman L, Nicolau DP. Meropenem time above the MIC exposure is predictive of response in cystic fibrosis children with acute pulmonary exacerbations. *Diagn Microbiol Infect Dis*. 2018 Jul; 91(3):294-7. doi: 10.1016/j.diagmicrobio.2018.01.020.

Procaskey A, White H, **Simoneau T**, Traeger N, Lahiri T, Jawdeh EGA, et al. The optimization of home oxygen weaning in premature infants trial: design, rationale, methods, and lessons learned. *Contemp Clin Trials*. 2018 Dec; 75:72-7. doi: 10.1016/j.cct.2018.08.001.

Putman MS, **Simoneau T**, Feldman HA, Haagensen A, Boyer D. Low bone density and fractures before and after pediatric lung transplantation. *Bone*. 2018 Jun; 111:129-34. doi: 10.1016/j.bone.2018.03.021.

Towle D, Baker V, **Schramm C**, O'Brien M, **Collins MS**, Feinn R, Murray TS. Ozone disinfection of home nebulizers effectively kills common cystic fibrosis bacterial pathogens. *Pediatr Pulmonol*. 2018 May; 53(5):599-604. doi: 10.1002/ppul.23990.

**STAFF**

**Craig Schramm, MD, Division Head**

- Melanie Sue Collins, MD**
- Keith Dixon, MD**
- Umit Emre, MD**
- Jay Kenkare, MD**
- Craig Lapin, MD**
- Anne McLaughlin, MD**
- Greg Morgan, MD**
- Lynelle Schneeberg, PsyD**
- Natalie Shilo, MD**
- Tregony Simoneau, MD**

- Tracey Allen APRN, NP-C**
- Rosalynn Bravo-Cavoli, APRN, AE-C**
- Amanda Filippelli, APRN, AE-C**



*The Division of Radiology provides a full spectrum of imaging services as well as minimally invasive image-guided procedures to all clinical divisions at Connecticut Children's Medical Center. The department is an "Image Gently" facility using strategies to minimize radiation to our patients while utilizing best practice standards and appropriateness criteria to best evaluate children.*

Imaging modalities range from digital radiography to complex magnetic resonance imaging. The department is accredited through the American College of Radiology in Ultrasound, CT and MRI. Nuclear Medicine services are provided through collaboration with Hartford Hospital. Image-guided procedures are provided through collaboration with physicians from Jefferson Radiology and Hartford Hospital in Interventional Radiology and Interventional Neuroradiology. With support from the divisions of Anesthesia and Sedation Services, more image-guided procedures are being performed on site at Connecticut Children's allowing for less disruption of care in a safer environment. Jefferson Radiology provides the department's 24/7 coverage of reading studies.

The Department of Radiology has seen major replacements and upgrading of imaging equipment over the past several years. Most basic imaging is performed with state-of-the-art digital radiography rooms, which allow for better plain film imaging with approximately 40 percent radiation dose reduction than conventional radiography. The department has newer ultrasound units allowing for superior imaging in a modality that is well suited to our pediatric population. A new Siemen's Sequoia unit was obtained in 2018 with planned expansion of ultrasound services to include soft tissue elastography and contrast-enhanced ultrasound procedures. Because of increasing demand for ultrasound services, hours of routine operation have been extended to midnight on weekdays and on weekends. Fluoroscopy is done using a Siemen's flat-panel fluoroscopy unit with pulsed fluoroscopy, which allows for significant radiation dose reduction with improved image quality. These upgrades support the philosophy of the department as an "Image Gently" and "Step Gently" facility to provide appropriate imaging while reducing as much as possible the effects of ionizing radiation. The Sedation Service and Department of Anesthesia offer outstanding resources to help children through difficult and lengthy imaging studies as well as image-guided procedures. Child Life provides support in the department for children undergoing difficult procedures as well.

There are plans for a major upgrade to the department in 2019. A 3T MR unit will be installed with redesign of the physical

space providing for an additional ultrasound room and a larger updated reading room to accommodate increasing numbers of staff and learners.

The Department of Orthopaedics relocated to the Bone & Joint Institute and is supported there by the Department of Radiology. A new EOS® unit allows for low dose evaluation of spine and limb alignment.

Dr. Shanshan Bao joined the department this past year and brings expertise in Body MR imaging. She completed a fellowship in Pediatric Radiology at Stanford University. Dr. Bao is involved in a multicenter initiative to evaluate the effects of iodinated contrast agents on thyroid function in infants.

Dr. Douglas Moote is collaborating with Dr. Jeffrey Hyams in the Division of Digestive Diseases, Hepatology and Nutrition to support ongoing multicenter grant-funded research evaluating the impact of MR imaging of children with inflammatory bowel disease.

The Division of Radiology provides resident education in Pediatric Radiology to radiology residents from the UConn School of Medicine, Hartford Hospital, and the Hospital of St. Vincent in Bridgeport, CT. Pediatric residents and medical students from the University of Connecticut are invited to attend elective rotations in the department. The radiology attendings provide didactic lectures to the radiology and pediatric residents as well as case review sessions. Teaching and clinical care conferences are held in collaboration with divisions of Pulmonary Medicine, Digestive Diseases, Endocrinology, General Surgery, Hematology-Oncology, Orthopaedic Surgery, and Urology, as well as the NICU and PICU. Work conferences are provided weekly to the Pediatric house staff.

## PUBLICATIONS

Malia L, Sturm JJ, Smith SR, **Brown RT**, Campbell B, Chicaiza H. Diagnostic accuracy of laboratory and ultrasound findings in patients with a non-visualized appendix. *Am J Emerg Med*. 2018 Aug 7.

Assa A, Amitai M, Greer M-L, Castro DA, Kuint RC, Martínez-León M, Herman-Sucharska I, Coppentrath E, Anupindi S, Towbin A, **Moote D**, et al, on behalf of the ImageKids Study Group. Perianal pediatric Crohn disease is associated with a distinct phenotype and greater inflammatory burden. *J Pediatr Gastroenterol Nutr*. 2017 Sep; 5(3):293-8.

Lam J, Coughlin R, Buhl L, Herbst M, Herbst T, Martillotti J, **Coughlin B**. Emergency medicine summary code for report-



ing CT scan results: implementation and survey results. *Emerg Radiol*. 2018; 25:303-10.

Mehta T, Datta N, Patel S, Mehta K, Hussain M, Kureshi I, **Ollenschleger M**, Nouh A. Trends in endovascular treatment of aneurysmal subarachnoid hemorrhages. *Intervent Neurol*. 2017; 6: 236-41.

## STAFF

**Timothy Brown, MD, Division Head**

**Douglas Moote, MD, Division Medical Director**

**Shanshan Bao, MD**

**Frederick Conard, MD**

**Michael Hallisey, MD**

**Josh Kallen, MD**

**Martin Ollenschleger, MD**

**Steven Poole, MD**

**Ron Rosenberg, MD**

**Gregory Wrubel, MD**

**David Zimmerman, MD**



*The mission of the Division of Research is to conduct and catalyze high-impact, internationally recognized research and policy work that improves the health, health care, well-being, and population health of infants, children, adolescents, and communities.*

The Division of Research accomplishes its mission through several mechanisms: 1) conducting research on improving the health and health care of children; 2) providing a cutting-edge research infrastructure to support all Connecticut Children's investigators, including research support staff, a statistical core, grant-writing assistance, and expert input on research operations and management; 3) mentoring early investigators, including high-school students, undergraduates, medical students, residents, fellows, and junior faculty; and 4) disseminating and publicizing the research findings of Connecticut Children's investigators. The division is staffed by more than 50 highly skilled professionals, including expert research associates, divisional research managers, certified study coordinators, and experienced sponsored-program administrators and analysts. Connecticut Children's research portfolio is supported by grants from a variety of federal funders (the Department of Health and Human Services, the National Institutes of Health, the Centers for Disease Control and Prevention, and the National Science Foundation), state agencies (Connecticut Department of Public Health, and Connecticut Department of Children and Families), foundations (Alvord Foundation, JPB Foundation, and the Lego Children's Fund), philanthropy, and the pharmaceutical industry. Connecticut Children's has robust research collaborations with UConn Health, UConn Storrs, and the Jackson Laboratory for Genomic Medicine. The University of Connecticut Technology Incubator Program is the home of a lab and team under the direction of Dr. Christine Finck, surgeon-in-chief, which consist of Dr. Rishikesh Pandey, and staff who include Todd Jensen, Liisa Kuhn, Kelly Burke, and Ishna Sharma.

There were several noteworthy 2018 achievements and recruitments for the Division of Research, including the translation of research into federal legislation, competitive renewal of a major grant from the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), multiple high-profile national and international presentations and keynote speeches, participation in research training programs for undergraduates and local high-school students, and publication of 17 articles and book chapters.

Dr. Flores's NIH R01-funded research on insuring uninsured children, the Kids' HELP trial, resulted in him drafting 2018 legislation which was introduced by Congressman Ben Luján (D-NM) and signed into law by Congress and President Donald

Trump in January 2018, as part of Children's Health Insurance Program (CHIP reauthorization). This legislation (<https://docs.house.gov/billsthisweek/20180115/BILLS-115SAHR195-RCP115-55.pdf>) makes organizations that use Parent Mentors eligible to receive \$120 million in grants for CHIP outreach and enrollment. This resulted in Dr. Flores consulting in 2018 for the Centers for Medicare and Medicaid Services (CMS) on releasing a new national request for applications on accessing this \$120 million funding stream, and he will provide guidance to CMS on how to implement Parent Mentor programs in all 50 states and the District of Columbia. The most recent findings from the Kids' HELP trial were published in the March 2018 issue of *Health Affairs*.

Dr. Flores continued his national leadership role as principal investigator and director of the NIDDK/Academic Pediatric Association (APA) Research in Academic Pediatrics Initiative on Diversity (RAPID), a program funded by an NIDDK R25 grant which was just competitively renewed for another five years (through 2023, for a total of 11 years), and that includes both a research project, and career and leadership development activities for young investigators across the United States who are from an underrepresented minority group or who are disabled or from a socially, culturally, economically, or educationally disadvantaged background. Dr. Flores also delivered the following 2018 national and international presentations:

- Parent Mentoring Program Increases Coverage Rates for Uninsured Latino Children. Advancing Health Equity, Health Affairs Issue Briefing, National Press Club, Washington, DC.
- Leveling the Playing Field: Achieving Equity and Eliminating Racial/Ethnic Disparities in Children's Health and Health Care. Maternal and Child Health Grand Rounds, Robert Stempel College of Public Health & Social Work, Florida International University, Miami, FL.
- Plenary address: Eliminating Racial/Ethnic Disparities in Health and Healthcare for Children with Intellectual and Developmental Disabilities and Their Families. 51st Annual 2018 Gatlinburg Conference on Research and Theory in Intellectual and Developmental Disabilities, San Diego, CA.
- Keynote speech: Dissatisfied, Misdiagnosed, and at Risk to Die: Patients with Language Barriers and Why Healthcare Systems Endanger Their Lives by Not Providing Professional Interpreters. International Medical Interpreters Association Regional Conference, Los Angeles, CA.
- Plenary presentation: Eliminating Racial/Ethnic Disparities in Health and Healthcare for Children with Special Healthcare Needs and Their Families. International Society for Social Pediatrics (ISSOP) 2018 Annual Conference, Bonn, Germany.
- Racial/Ethnic Disparities in the Health and Healthcare of

Latino Children. Special lecture, Latino Health, Research, and Policy Conference, Colorado School of Public Health, Denver, CO.

- Special lecture: Leveling the Playing Field: What a Quality Committee Can Do to Achieve Equity and Eliminate Racial/Ethnic Disparities for Children. Action Committee for Quality Outcomes, Children's Hospital of Los Angeles, Los Angeles, CA.
- Keynote speech: Dissatisfied, Misdiagnosed, and at Risk to Die: Patients with Language Barriers and Why Healthcare Systems Endanger Their Lives by Not Providing Professional Interpreters or Bilingual Providers. Tennessee Disability Pathfinder and Multicultural Alliance on Disability, Vanderbilt Kennedy Center for Excellence in Developmental Disabilities, Nashville, TN.

Dr. Zhu Wang served as an ad hoc reviewer for the National Institutes of Health's Health Services Organization and Delivery (HSOD) study section, which reviews federal grant applications that focus on the organization, delivery, and utilization of health care services, as well as health outcomes specifically related to health services.

Katherine Herbst presented an educational session, "How to Write a Clinical Research Protocol," at the European Society for Paediatric Urology 29th Congress in Helsinki, Finland. Ms. Herbst also delivered a presentation in a panel discussion, "They Say Most Clinical Research Is Wrong – Is It Still Worth Doing?" at the Societies for Pediatric Urology Fall Congress in Atlanta, GA.

Our Clinical Trials Unit (CTU) experienced substantial growth this year, with the number of clinical trials increasing by 50 percent, and clinical trials income increasing over 40 percent, reaching over \$1 million for the first time in CTU history. CTU provides support for the entire clinical-trial cycle, from site selection to study close-out. CTU also supports R01, R21, and principal-investigator-initiated studies, investigational new-drug studies, and investigational device exemptions, both in developmental and coordination phases. In close collaboration with the Office for Grants & Sponsored Programs, CTU staff help to develop budgets, contracts and conduct negotiations for both grant- and industry-supported studies. CTU has an experienced and dedicated team, consisting of 26 staff providing support and management for more than 165 clinical trials in 19 divisions. In 2018, the unit brought in \$1,277,121 in funding for these trials.

The Division of Research also substantially strengthened the research infrastructure for investigators at Connecticut Children's, with the recruitment of three new staff. We welcomed Dr. Bruce Lacey, our new full-time grant writer, to our team. Dr. Lacey has over seven years of medical research grant-writing

experience, with the previous procurement of over \$12 million in grant funding. Since his arrival at Connecticut Children's, he has participated in the submission of 17 federal and foundation grant applications, with eight currently in process.

The expansion of our biostatistical core was a priority in 2018. We welcomed Maua Mosha, MPH, who came to us from Yale University, where she was a biostatistician and data manager for the Yale AIDS program for the past 10 years. Her expertise in study, database development, and biostatistics complements the skill set of our senior biostatistician, Dr. Zhu Wang, creating a comprehensive statistical-support team. Together, they initiated a web-based statistical-support request portal. They also inaugurated a biostatistical series consisting of six classes offered bi-annually to investigators, trainees, and staff. In 2018, our biostatistical core supported over 55 investigators and 40 studies, greatly contributing to research productivity at Connecticut Children's. This increased productivity was perhaps best manifested by a 27 percent rise in published peer-review manuscripts, from 143 in 2017, to 182 in 2018.

We also welcomed Willie Frazier, III, MPH, as research program manager. He obtained his undergraduate degree from Virginia Tech, and a master's of public health from the University of Massachusetts, Amherst. He joined us after spending several years as a research associate at the UConn Rudd Center for Food Policy and Obesity. He will manage research, programs, and community outreach for Dr. Flores, as well as assist trainees with their research.

The Division of Research additionally initiated collaborations with two area pipeline programs. We hosted and mentored two summer students through the UConn Partnership for Innovation and Education (PIE), whose goals are to help build Connecticut's future health and technology workforce and to encourage bioscience commercialization in the state. PIE consists of a mentored 10-week summer research fellowship in bioscience and technology for college undergraduates and graduates. Both PIE students are continuing their summer projects during their school year. We also established a new relationship with the Sports and Medical Sciences Academy (SMSA), a Hartford magnet high school. We hosted and mentored seven SMSA high-school students who will be presenting their research findings at the annual SMSA science fair and STEM Conference.

Connecticut Children's Technology Incubation Program laboratories continued to make progress in developing label-free cell imaging and new medical devices for children. Promising preliminary data have been obtained on label-free cell imaging for the diagnosis and treatment of childhood leukemia. In addition to addressing label-free imaging, a team of researchers led by





Dr. Christine Finck continues to work on the development of a prototype medical device aimed at reducing the number of procedures and complications associated with surgical correction of esophageal atresia. A provisional patent has been filed for the device design this year, with the plan to file a full patent application by spring 2019.

## PUBLICATIONS

D'Alessandri-Silva C, **Carpenter M**, Mahan JD. Treatment regimens by pediatric nephrologists in children with congenital nephrogenic diabetes insipidus: A MWPNC study. *Clin Nephrol*. 2018; 89(5):358-63.

Roman SB, Matthews-Wilson A, Dickinson P, **Chenard D**, Rogers SC. Current pediatric emergency department innovative programs to improve the care of psychiatric patients. *Child Adolesc Psychiatr Clin N Am*. 2018; 27(3):441-54.

Lee YM, Conlon TJ, Specht A, Coleman KE, Brown LM, **Estrella AM**, **Dambaska M**, **Dahlberg KR**, Weinstein DA. Long-term safety and efficacy of AAV gene therapy in the canine model of glycogen storage disease type Ia. *J Inher Metab Dis*. 2018 May 25. doi: 10.1007/s10545-018-0199-7. [Epub ahead of print]

**Flores G**, Lin H, Walker C, Lee M, Currie J, Allgeyer R, et al. Parent mentoring program increases coverage rates for uninsured Latino children. *Health Aff (Millwood)*. 2018; 37(3):403-12.

**Flores G**. Building a better America and world by prioritizing children's health, healthcare, and well-being. *Acad Pediatr*. 2018; 18(5):493-5.

Hollenbach J, Villarreal M, Simoneau T, Langton C, Mitchell H, **Flores G**, Cloutier M, Szeffler S. Inaccuracy of asthma-related self-reported health-care utilization data compared to Medicaid claims. *J Asthma*. 2018:1-4.

Bergmann KR, Reardon RF, **Flores G**, Whitcomb V, Christensen EW, Watson D, Kharbada A. Trends in medical claims and utilization of limited ultrasonography among emergency physicians and radiologists within a large health plan provider. *J Ultrasound Med*. 2018 Sep 12. doi: 10.1002/jum.14808. [Epub ahead of print]

**Herbst KW**, Harper L, Kalfa N. A brief description of study design. *J Pediatr Urol*. 2018; 14(2):135-6.

Harper L, **Herbst KW**, Kalfa N. Ethical issues in research: human and animal experimentation. *J Pediatr Urol*. 2018; 14(3):287-8.

Bayne CE, Farah D, **Herbst KW**, Hsieh MH. Role of urinary tract infection in bladder cancer: a systematic review and meta-analysis. *World J Urol*. 2018; 36(8):1181-90.

Harper L, Castagnetti M, **Herbst K**, Bagli D, Kaefer M, Beckers G, et al. How to apply for a research grant: 10 tips and tricks. *J Pediatr Urol*. 2018 Sep 11. doi: 10.1016/j.jpuro.2018.08.016. [Epub ahead of print]

Brownell EA, Matson AP, **Smith K**, Moore JE, Esposito PA, Lussier MM, et al. Dose-response relationship between donor human milk, mother's own milk, preterm formula, and neonatal growth outcomes. *J Pediatr Gastroenterol Nutr*. 2018; 67(1):90-6.

Vittner D, Butler S, **Smith K**, Makris N, Brownell E, Samra H, et al. Parent engagement correlates with parent and preterm infant oxytocin release during skin-to-skin contact. *Adv Neonatal Care*. 2018 Oct 16. doi: 10.1097/ANC.0000000000000558. [Epub ahead of print]

**Thaker S**, McKenna E, Rader C, Misra MV. Pain management in pectus excavatum surgery: a comparison of subcutaneous catheters versus epidurals in a pediatric population. *J Laparoendosc Adv Surg Tech A*. 2018 Sep 25. doi: 10.1089/lap.2018.0244. [Epub ahead of print]

**Wang Z**. Quadratic majorization for nonconvex loss with applications to the boosting algorithm. *J Comp Graph Stats*. 2018; 27(3):491-502.

**Wang Z**. Robust boosting with truncated loss functions. *Electron J Statist*. 2018; 12(1):599-650.

Toro-Salazar OH, Lee JH, Zellars KN, Perreault PE, Mason KC, **Wang Z**, et al. Use of integrated imaging and serum biomarker profiles to identify subclinical dysfunction in pediatric cancer patients treated with anthracyclines. *Cardiooncology*. 2018; 4:4.

Cloutier MM, Wiley JF, Kuo CL, Cornelius T, **Wang Z**, Gorin AA. Outcomes of an early childhood obesity prevention program in a low-income community: a pilot, randomized trial. *Pediatr Obes*. 2018; 13(11):677-85.

## STAFF

**Glenn Flores, MD, FAAP, Division Director, Chief Research Officer, and Associate Chair of Research**

**Stephanie Johnson, MT (ASCP), MPH, Director, Research Operations**  
**Katherine Herbst, MS, Manager, Urology and Nephrology**  
**Alan Ahlberg, Research Associate**  
**Mary Ann Banevicius, Research Associate**  
**Melinda Carpenter, Research Associate**  
**Bridgette Carter, Research Associate**  
**Danielle Chenard, Research Program Manager**  
**Willie Frazier, III, Research Program Manager**  
**Brenda Labbe, Administrative Assistant**  
**Bruce Lacey, PhD, Grant Writer**  
**Ji Hyun Lee, MD, MPH, Instructor, Research Scientist**  
**Maua Mosha, Biostatistician**  
**Rosa Rodrigues, Research Associate**  
**Rosalie Lyons, Research Associate**  
**Kathleen Sala, Research Associate**  
**Shefali Thaker, Research Associate**  
**Zhu Wang, PhD, Associate Professor, Senior Biostatistician**

## Clinical Trials Unit

**Kim Jennings, Senior Manager**  
**Robin Arens, Lead Clinical Trials Associate, Hematology/Oncology Division**  
**Alexandrea Buscarello, Clinical Research Assistant**  
**Erin Bennett, Clinical Research Associate**  
**Kathy Dahlberg, Clinical Research Associate**  
**Monika Dambaska, Clinical Research Associate**  
**Iris Ferrecchia, Clinical Research Associate**  
**William Galdi, Clinical Research Associate**  
**Jocelyn Gasuk, Senior Clinical Research Facilitator**  
**Kristine Hauser, Clinical Research Facilitator**  
**Dayna Kennedy, Clinical Research Associate**  
**Ashley Kosikowski, Clinical Research Assistant**  
**Bunly Kuoch, Clinical Research Assistant**  
**Lisa Little, Regulatory Specialist**  
**Hendriana Nielsen, Clinical Research Facilitator**  
**Vikki Palmer, Clinical Research Facilitator**  
**Krystal Perez, Clinical Research Assistant**  
**Jennifer Querim, Clinical Research Associate**  
**James Ransom, Clinical Research Associate**  
**Traci Resler, Program Coordinator**  
**Katalin Ross, Metabolic Dietitian**  
**Tiffany Ruiz, Clinical Research Facilitator**  
**James Santanelli, Clinical Research Associate**  
**Jennifer Twachtman-Bassett, Research Coordinator, Autism Specialist**





*The Division of Pediatric Rheumatology provides comprehensive, family centered care for children with rheumatic disease, chronic pain syndromes, and Lyme disease, at four sites throughout Connecticut.*

The mission of the division is to provide the best clinical care possible to children with rheumatic disease, teach trainees the basics of the field, and enroll patients in clinical trials or collaborative research projects when applicable.

We continue to run a high volume practice. During 2018, we saw patients in five locations: Connecticut Children's Medical Center in Hartford, and our satellite locations in Shelton, Glastonbury, and Stamford, CT, and Springfield, MA.

Our total number of patient visits across all locations for the year was 3,350, a number that includes 1,250 new visits. Joint injections numbered 150; discrete infusion patients, 81; and inpatients, 76.

The Division of Rheumatology collaborates with the Sedation service around procedures, Orthopaedics for overlapping disorders, Digestive Diseases, Hepatology and Nutrition for infusions and drug toxicities, Hematology-Oncology for disorders that span both specialties, Nephrology for lupus and vasculitis, Infectious Diseases for Lyme disease, and the Pain and Palliative service for children with amplified pain disorders such as fibromyalgia. The division fully utilizes the resources of the hospital, since many of the patients have multisystem disease or complex psychosocial problems.

The division provides critical education to trainees, since the outpatient rotation is often the only exposure pediatric residents have with rheumatic disease. Trainees include pediatric residents, third and fourth year medical students, and adult rheumatology fellows from the University of Connecticut.

Under the leadership of Dr. Lawrence Zemel, Connecticut Children's Division of Rheumatology continues to offer a Comprehensive Lyme Disease Program. It is the only one of its

kind in the country. The program is a unique resource for families and for referring providers who see patients with complex issues surrounding Lyme disease diagnosis and treatment. Several clinical trials were conducted during 2018.

In 2018, Rheumatology staff members served on several national committees. Dr. Zemel continues as chair of the arthritis subcommittee for the National Guideline Committee to Revise Lyme Disease Diagnosis and Treatment Standards. Publication is expected in July 2019. Dr. Heather Tory was appointed as chair of the Juvenile Dermatomyositis Quality Measures Subcommittee for the Childhood Arthritis and Rheumatology Research Alliance, and she is a member of the Quality Measures Subcommittee of the Quality of Care Committee for the American College of Rheumatology.

Division members participate in a wide range of Connecticut Children's committees. Dr. Barbara Edelheit is a member of the Public Policy Council and the Physician Engagement and the Physician Well-Being committees, among others. Dr. Tory is co-chair of the Connecticut Children's Specialty Group Quality and Safety Committee, chair of the medical center's Emergency Response Committee, and co-chair of its Career Development Committee. She is acting as interim head of the Division of Quality and Safety until a full-time replacement is found.

Looking ahead to 2019, we recruited a fourth pediatric rheumatologist, Dr. Blaine Lapin, who finished his fellowship in pediatric rheumatology at Texas Children's Hospital, and will be starting at Connecticut Children's in September 2019. We recently hired a 0.5 FTE psychologist, Dr. Christine Nunes, who will be providing mental health services to our patient population in our rheumatology clinic. We will be expanding services in Fairfield County, including the new facility in Danbury, and the proposed facility in Westport. We will be working closely with several other disciplines in providing support for our new infusion center in Farmington. Dr. Zemel will be writing a revised chapter on Lyme disease in a major textbook, *Textbook of Pediatric Rheumatology*.

#### PUBLICATIONS

Angeles-Han S, Lo M, Henderson L, Lerman M, Abramson L, Cooper A, **Zemel L**, et al. Childhood Arthritis and Rheumatology Research Alliance consensus treatment plans for juvenile idiopathic arthritis-associated and idiopathic chronic anterior uveitis. *Arthritis Care Res (Hoboken)*. 2018 May 28. doi: 10.1002/acr.23610.

Hinze CH, Foell D, Johnson AL, Spalding SJ, Gottlieb BS, Morris PW, et al., (**Zemel L**, 10/17, **Edelheit B**, 11/17). Serum S100A8/A9 and S100A12 levels in children with polyarticular forms of juvenile idiopathic arthritis: relationship to maintenance of clinical inactive disease during and flare after discontinuation of anti-TNF therapy. *Arthritis Rheumatol*. 2018 Sep 18. doi: 10.1002/art.40727.

Sneller H, Vega C, **Zemel L**, Chicaiza H. Acute hemorrhagic edema of infancy with associated hemorrhagic laceration. *Pediatr Emerg Care*. 2018 Aug 14. doi: 10.1097/PEC.0000000000001542.

Challa D, Crowson C, Niewold T, **Zemel L**, Reed A, for the CARRA Legacy Registry Investigators. Predictors of changes in disease activity among children with juvenile dermatomyositis enrolled in the Childhood Arthritis and Rheumatology Research Alliance (CARRA) Legacy Registry. *Clin Rheumatol*. 2018 Apr; 37(4): 1011-5.

**Tory HO**, Carrasco R, Griffin T, Huber AM, Kahn P, Robinson AB, Zurakowski D, Kim S. Comparing the importance of quality measurement themes in juvenile idiopathic inflammatory myositis between patients and families and healthcare professionals. *Pediatr Rheumatol Online J*. 2018 Apr 19; 16(1):28. doi: 10.1186/s12969-018-0248-7.

#### STAFF

**Lawrence Zemel, MD, Division Head**

**Barbara Edelheit, MD**

**Heather Tory, MD**

**Blaine Lapin, MD**

**Christine Nunes, PhD**

**Ann Wrynn, RN**

**Tegan Willard, RN**





*The Center of Procedural Excellence (CoPE) is a six-bed unit within Connecticut Children's Medical Center dedicated to providing high-quality procedural sedation for pediatric patients. This is one of only a few centers in New England with space and staff dedicated to non-operating-room pediatric sedation. The CoPE was opened in March 2016 with generous donations from the Connecticut Children's Foundation and the UConn HuskyThon. The Sedation Service provides comprehensive high-quality care with a focus on the patient and family experience. In 2014, prior to having dedicated space for non-operating-room sedation, the service cared for about 500 patients annually with a staff of one full-time physician and two nurses. To meet continued demand, we now have expanded to four physicians, nine full-time nurses with credentialing in sedation, one medical assistant, and a full-time child life specialist.*

The Sedation Service works with nearly all subspecialties within Connecticut Children's to provide sedation for painful procedures including: bone marrow aspiration/biopsy in Oncology patients, kidney biopsies for Nephrology, imaging for Radiology, catheter placement and minor surgical procedures for Urology and Surgery, central line placement for the PICC line service, and vaccination/lab draws for patients with autism spectrum disorders. Our service utilizes a mixture of intravenous, oral, and inhaled sedative agents to provide mild to deep sedation, scaled to meet the developmental and procedural needs of each patient.

We are humbled by our high commendations from patients and families, a testament to our continued efforts to develop a family centered approach to care delivery. To that end, associate medical director Dr. Kalyani Raghavan continues to develop strategies to serve the needs of our patients with autism spectrum disorders. Working with colleagues in Developmental Pediatrics at Connecticut Children's and with state and national experts, Dr. Raghavan has developed social stories to help prepare patients and families for their procedural sedation. These social stories are available online and can be viewed by families to prepare

their child for the visit to Sedation. Dr. Raghavan has received grant funding from Autism Speaks® and other outside foundations to continue her very important work. Further developing her expertise in alternative approaches to management of pain and anxiety, Dr. Raghavan was certified as a yoga therapist by the International Association of Yoga Therapists. To help families prepare for their visit, our child life specialist is also available to call families prior to their visit to help develop individualized approaches with the family's input.

Members of the Sedation Team are involved in leadership and committees at Connecticut Children's. Dr. Leonard Comeau is chairperson of the Sedation and Analgesia Committee and is responsible for writing and updating sedation policies, updating and overseeing credentialing of the house staff, and monitoring safety and quality of sedation hospital-wide. Members of the Sedation Service also participate on hospital committees on pain management, the patient and family experience, pediatric palliative care, and quality and safety. Dr. Kathy Kalkbrenner was appointed as clinical director of the Division of Hospital Medicine and received the Annual Faculty Award for Excellence in Teaching in 2018.

Education and research remain a significant part of our mission. Faculty-led research has explored the degree of parent and nursing satisfaction with the use of mild sedatives for Emergency Department procedures. In collaboration with colleagues in Rehabilitation Medicine, we studied the safety of deep sedation for procedures to manage spasticity in patients with cerebral palsy. Members of our nursing team, Kim Paula-Santos and Fiona Sellew, were awarded a competitive Nursing Research Fellowship to study the use of the sedative dexmedetomidine for use in sedated hearing screens. Our educational commitment remains strong. Every UConn Pediatric and Emergency Medicine intern (35 per year) spends a week on a dedicated Sedation rotation. Residents participate in all aspects of patient care, are given hands-on training in airway management, and become credentialed to independently provide moderate sedation.

Our mission is to provide the highest quality care for children undergoing tests and procedures outside the operating room. We aim to utilize not just sedation medications but distraction techniques, alternative therapies, and a family centered approach to minimize anxiety and unnecessary pain and discomfort for our patients.

**PUBLICATIONS**

**Sturm JJ.** Regulatory issues in sedation. In: Gooden's pediatric procedural sedation handbook. Oxford University Press; 2018.

Malia L, Laurich VM, **Sturm JJ.** Adverse events and satisfaction with use of intranasal midazolam for emergency department procedures in children. Am J Emerg Med. doi: 10.1016/j.ajem.2018.04.063. Epub 2018 Apr 30.

Gandhi S, Lin M, Smith SR, **Sturm JJ.** Predictors of abnormal electrocardiograms in the pediatric emergency department. Ann Pediatr Cardiol. 2018 Sep-Dec; 11(3):255-60. doi: 10.4103/apc.APC\_155\_17.

Malia L, **Sturm JJ,** Smith SR, Brown RT, Campbell B, Chicaiza H. Diagnostic accuracy of laboratory and ultrasound findings in patients with a non-visualized appendix. Am J Emerg Med. 2018 Aug 7. pii: S0735-6757(18)30650-8. doi: 10.1016/j.ajem.2018.08.014. [Epub ahead of print]

**STAFF**

**Jesse Sturm, MD, MPH, Division Director**

**Kalyani Raghavan, MBBS, MD, DCH**

**Kathy Kalkbrenner, MD**

**Leonard Comeau, MD**





*The mission of the Pediatric Surgery Division is to provide the highest quality family centered surgical care. The year 2018 was characterized by growth in volume and staff. Among the significant achievements of our members, Dr. Brendan Campbell, the medical director of Pediatric Trauma Program, emerged as a unique and compelling voice in the national debate on gun violence. In addition, Dr. Christine Finck, Connecticut Children's Surgeon-in-Chief, Pediatric Surgery division head, and Peter Decker Endowed Chair, was awarded a \$1.2 million NIH grant for her work in tissue engineering as well as the Women in Innovation Award from the Connecticut Technology Council.*

**Clinical Care**

The Division of Pediatric Surgery offers a full range of clinical services for patients from newborns to young adults. This includes prenatal consultations, the treatment of congenital anomalies, head and neck surgery, surgery of the chest and abdomen, pediatric gynecology, non-reconstructive urology, surgical oncology, and trauma. Under the leadership of Dr. Campbell, who holds the Donald W. Hight Endowed Chair, Connecticut

Children's earned re-verification by the American College of Surgeons as a Level I Pediatric Trauma Center in 2017, a verification that lasts for three years.

Satellite offices are currently available in Farmington, Glastonbury, and Danbury that allow increased convenience for our families. Outpatient surgery is also performed at the Connecticut Children's Ambulatory Surgery Center in Farmington as well as at Danbury Hospital. Urgent care, including same-day access to our Hartford office for emergent and urgent surgical problems, is available. This can avoid an emergency room visit.

Dr. Christine Rader remains surgical director of the Extracorporeal Membrane Oxygenation Program, which cares for some of the sickest patients in the hospital who require cardiopulmonary life support. The Multidisciplinary Thyroid Group, led by Drs. Finck, Pediatric Surgery's medical director Richard Weiss, and Rebecca Riba-Wolman, enables children with thyroid diseases to be rapidly and simultaneously evaluated by a surgeon as well as an endocrinologist. The Multidisciplinary Prenatal Evaluation Program continues to be co-directed by Dr. Weiss. This program is a joint effort with the divisions of Obstetrics and Maternal Fetal Medicine at Hartford Hospital, as well as multiple medical and surgical divisions at Connecticut Children's.

The Bariatric Surgical Program under the leadership of Drs. Finck and Meghna Misra has been joined by the Weight Management Program under the leadership of Drs. Melissa Santos and Jessica Zimmerman. This program is comprehensive in delivering medical and surgical care and allows patients and their families to be evaluated in one location by multiple disciplines. In addition, the program has launched transition planning to enable young adults to obtain care from adult providers when the time is right. The Chest Wall Deformities Program, led by Dr. Misra, continues to evaluate and treat patients with pectusexcavatum and pectus carinatum. This year, Dr. Misra published in the *Journal of Laparoendoscopic and Advanced Surgical Techniques* on the comparison of subcutaneous catheters vs. epidural catheters in the management of pain in these patients.

Dr. Rader provides surgical expertise to the Short Gut Program. She also provides pediatric surgical expertise to the Aerodigestive Program.

**Advocacy**

Dr. Campbell, MD, MPH, FACS, continues to be involved as a leading voice regionally and nationally in advocating for a new approach to the prevention of firearms injuries. Throughout 2018, he served on the American College of Surgeons Committee on Trauma (ACS COT) Firearm Strategy Team (FAST) Workgroup, a geographically diverse team of 18 American surgeons who are passionate firearm owners with a broad range of experience with firearm ownership and use. Charged with creating an effective and durable strategy for reducing firearm injury, death, and disability in the United States, the team issued 13 recommendations in a major article published by the *Journal of the American College of Surgeons*. The article drew significant attention from national media sources, and Dr. Campbell was subsequently interviewed on CNN and by Slate Media. Furthering his and his surgeon-colleagues' efforts to foster constructive dialogue and "treat" the problem of gun violence in America, Dr. Campbell lectured on various topics concerning gun violence and firearm injuries at national events including the Trauma Quality Improvement Program Annual Scientific Meeting in Anaheim, CA, the American College of Surgeons Clinical Congress in Boston, MA, and the 77th Annual Meeting of the American Association for the Surgery of Trauma in San Diego, CA. Also this year, Dr. Campbell was appointed vice chair of the Injury Prevention and Control Committee for the American College of Surgeons Committee on Trauma. Locally, Dr. Campbell continues to lead efforts by the division and the hospital in the American College of Surgeons' Pediatric National Surgical Quality Improvement Program (NSQIP), which has been highly successful in improving the quality of children's surgical care. He has been named co-chair of the Public Safety Transition Committee for Connecticut Governor-elect Ned Lamont. Additionally, he was awarded a \$5,000 seed grant for 2018 and 2019 as PI for a study of the evaluation of an Intimate Partner Violence Screening Intervention Model.

Dr. Finck along with resident Ishna Sharma, MD, contributed research on Intimate Partner Violence that is included in the Fundamentals of Surgery Curriculum for the American College of Surgeons.

Dr. Weiss continues as an ex officio member of the American Pediatric Surgical Association (APSA) Practice Committee, which monitors the practice of pediatric surgery in North America, reports trends in practice patterns, and offers guidance to APSA members for improvements and optimization of care delivery. In 2018, he was appointed as an advisor for the American Pediatric Surgical Association to the AMA/Specialty RVS Update Committee (RUC).

**Education**

One of the core missions of the division is to educate future physicians, and it has offered a pediatric surgery fellowship since 2012. Katerina Dukleska, MD, will join the division in August 2019. She will arrive after completing the General Surgery residency program at Thomas Jefferson University Hospitals in Philadelphia.

Dr. Rader is the site director for the University of Connecticut General Surgery Residency Program. Surgical residents from the University of Connecticut, Stamford Hospital, Waterbury Hospital, and Saint Mary's Hospital rotate through our service. Pediatric residents continue to spend time on our service. Quinipiac University medical students in their third year continue to utilize our service for their inpatient pediatric rotation. Electives also are provided to third and fourth year medical students from the University of Connecticut.

Drs. Weiss, Rader, and Campbell teach an Advanced Trauma Life Support (ATLS) course to UConn house staff, community physicians and advance practice providers twice a year.

Division staff contributed on a national level with presentations at a variety of meetings including the American Pediatric Surgical Association, the American College of Surgeons, and the Connecticut Chapter of the American College of Surgeons.

**Research**

Dr. Finck's laboratory work focuses on innovation and tissue engineering of organs including the lungs and the esophagus. Over the last year, the laboratory has engaged in pre-clinical trials around an implantable scaffold to repair the esophagus. The NIH awarded this project \$1.2 million to continue research in collaboration with a small company, Biostage, based out of Boston.

The division continues its participation in a national multicenter study to determine the timing of inguinal hernia repair in premature infants. The principal investigator is Dr. Misra. The division is active in other IRB-approved studies as well as health services research, injury prevention research under the leadership of



Dr. Campbell, and basic science research from the lab of Dr. Finck. Dr. Sharma, who joined us in July 2017 as the first Peter Decker Surgical Research Fellow in the lab, has won several innovation awards for basic science research.

### The Future

Our longtime colleague and former Physician-of-the-Year Michael Bourque, MD, retired this year, but he continues to take on-call responsibilities intermittently until our new staff members join the division. We are delighted to announce that James Healey, MD, who will complete our Pediatric Surgery Fellowship program in July 2019, is taking a staff position in August 2019. We are actively recruiting another surgeon to round out our team in 2019. Other plans for 2019 include increasing the division's presence in Fairfield County.

### PUBLICATIONS

Recommendations from the American College of Surgeons Committee on Trauma's Firearm Strategy Team (FAST) Workgroup: Chicago Consensus I. Talley CL, **Campbell BT**, Jenkins DH, Barnes SL, Sidwell RA, Timmerman G, et al. J Am Coll Surg. 2018 Nov 14. pii: S1072-7515(18)32155-0. doi: 10.1016/j.jamcollsurg.2018.11.002. [Epub ahead of print]

Baumann L, Clinton H, Berntsson R, Williams SS, Rovella JC, Shapiro D, Thaker S, Borrup K, Lapidus G, **Campbell BT**. Suicide, guns, and buyback programs: an epidemiologic analysis of firearm-related deaths in Connecticut. J Trauma Acute Care Surg. 2017 Dec; 83(6):1195-9.

Puls MW, Kuhls DA, **Campbell BT**, Burke PA, Michelassi F, Stewart RM. Survey of the American College of Surgeons Board of Governors on firearm injury prevention: consensus and opportunities. Bull Am Coll Surg. 2017 Oct; 102(10):30-6.

Stewart RM, Kuhls DA, **Campbell BT**, Letton RW, Burke PA, Dicker RA, Gaines BA. The COT's consensus-based approach to firearm injury: an introduction. Bull Am Coll Surg. 2017 Oct; 102(10):13-9.

Naik-Mathuria BJ, Rosenfeld EH, Gosain A, Burd R, Falcone RA Jr, Thakkar R, Gaines B, Mooney D, Escobar M, Jafri M, Stallion A, Klinkner DB, Russell R, **Campbell B**, et al. Proposed clinical pathway for nonoperative management of high-grade pediatric pancreatic injuries based on a multicenter analysis: a Pediatric Trauma Society collaborative. J Trauma Acute Care Surg. 2017 Oct;83(4):589-96.

**Sharma I**, Finck C, Jensen T, Cho WC, **Weiss R**, Balarezo F, Thaker S. Uncommon pediatric pancreatic masses: case series and literature review. J Pediatr Res. 2018 Jul.

**Sharma I, Finck C**. ACS Fundamentals of Surgery Curriculum (ACS FSC) intimate partner violence scenario. American College of Surgeons FSC. 2018 Oct.

Sayej W, Foster C, Jensen T, Chatfield S, **Finck C**. Expanding and characterizing esophageal epithelial cells obtained from children with eosinophilic esophagitis. J Pediatr Res. 2018 Jun 12. PMID 29895838.

Thaker S, McKenna E, **Rader C, Misra MV**. Pain management in pectus excavatum surgery: a comparison of subcutaneous catheters versus epidurals in a pediatric population. J Laparoendosc Adv Surg Tech A. 2018 Sept 25. doi: 10.1089/lap.2018.0244. PMID 30256160.

Tran A, Campbell JD, **Misra M**, Hu YY, Banasiak K, Schlott H, **Rader C**. Surviving 49 days of extracorporeal life support complicated by lung necrosis, pneumothorax, intrathoracic hematoma, and bronchopleural fistulas in a 13-year-old. J Ped Surg Case Rep. 2018 Sep; 36:28-32.

Manworren RCB, Anderson MN, Girard ED, Ruscher KA, Verissimo AM, Palac H, **Weiss R, Rader C**, Hight D. Postoperative pain outcomes after Nuss procedures: comparison of epidural analgesia, continuous infusion of local anesthetic, and preoperative self-hypnosis training. J Laparosc Adv Surg Tech A. 2018 April 2. doi: 10.1089/lap.2017.0699.

### STAFF

**Christine Finck, MD, FACS,**  
Surgeon-in-Chief, Division Head

**Michael Bourque, MD, FACS**  
**Brendan Campbell, MD, MPH, FACS,**  
Medical Director Pediatric Trauma Program;  
Chief Surgical Quality and Safety Officer

**Donald W. Hight, MD, emeritus**

**George McGowan, MD, emeritus**

**Meghna Misra, MD, MS, FACS,**

Director, Pectus Program

**Christine Rader, MD, FACS, Surgical Director,**  
Extracorporeal Membrane Oxygenation Program

**Ishna Sharma, MD, research fellow**

**Shefali Thaker, BA, research associate**

**Richard Weiss, MD, FACS,**

Medical Director, Pediatric Surgery Division

**Sandy Purcell, APRN**

**Morgan D'Antuono, PA**

**Nicole Boone, PA**

**Samantha Pelow, APRN**

**Jeanette Rybski, APRN**

**Elisabeth Campbell, PA**

### Fellows

**James Healy, MD**



*In 2018, the Division of Renal Transplant at Connecticut Children's enjoyed substantial growth. Working closely with the divisions of Pediatric Surgery and Nephrology, the pediatric kidney transplant program increased surgical cases and saw stellar clinical outcomes. The division welcomed Oscar Serrano, MD, who took on the role of main transplant surgeon for pediatric renal cases.*

The Renal Transplant Division has a strong quality commitment. Each program has a quality indicator dashboard as well as a process improvement dashboard that tracks PI projects such as revisions of policies, decreasing infections, and developing algorithms to improve patient care. Specifically, a steroid-free protocol was created to be on the cutting edge of therapies offered to children in the country. The year 2018 also marked the achievement of three renal transplants with successful use of our steroid-free protocol.

### STAFF

**Patricia Sheiner, MD, FACS,**  
Division Director

**Carolyn Rochon, MD**  
**Oscar Serrano, MD**  
**Brian Shames, MD**





In 2018, U.S. News & World Report ranked Connecticut Children's Pediatric Urology Division as one of the best in the country for 2018-19.

The Pediatric Urology Division provides comprehensive urologic care. In 2018, the service remained busy with 5,697 visits and 745 operative cases. The division continues to provide interdisciplinary specialty clinics with Pediatric Nephrology and Endocrinology services. These include: GUPPE Clinic for patients with disorders of sexual development, ROCKS Clinic for patients with kidney stones, Prenatal Clinic for patients noted to have urologic conditions on prenatal ultrasound, and PUV Clinic for patients with posterior urethral valves. We also offer a Voiding and Bladder Dysfunction Clinic for the management of neurogenic bladders and non-neurogenic voiding issues. Finally, we are in the process of developing a Spinal Defects Clinic for patients with congenital as well as acquired spinal disorders. Dr. Anne Dudley continues to build her practice and has been a productive academician. Drs. Adam Hittelman and Israel Franco continue to work with us as part of our ongoing academic collaboration with Yale New Haven Hospital. Our research coordinator Katherine Herbst, MSc, continues to be a nationally recognized figure in the Pediatric Urology community and has had a very productive academic year.

**Division Changes**

The year 2018 was a time of stabilization in the Division of Urology. In August, we welcomed Dr. Courtney Rowe as a junior faculty member. Her practice will be 50 percent academic and 50 percent clinical. She is a recent graduate of the Pediatric Urology Fellowship at Seattle Children's Hospital. She comes

from a distinguished background having graduated from Brown University as an undergraduate then completing a Harvard University Urology Residency. Interestingly, before medicine, she was an artist in New York City.

**PUBLICATIONS**

**Herbst KW**, Harper L, Kalfa N. A brief description of study design. J Pediatr Urol. 2018; 14(2):135-6.

Harper L, **Herbst KW**, Kalfa N. Ethical issues in research: human and animal experimentation. J Pediatr Urol. 2018; 14(3):287-8.

Bayne CE, Farah D, **Herbst KW**, Hsieh MH. Role of urinary tract infection in bladder cancer: a systematic review and meta-analysis. World J Urol. 2018; 36(8):1181-90.

Harper L, Castagnetti M, **Herbst K**, Bagli D, Kaefer M, Beckers G, Fossum M, Kalfa N. How to apply for a research grant: 10 tips and tricks. J Pediatr Urol. 2018 Sep 11. doi: 10.1016/j.jpuro.2018.08.016. [Epub ahead of print]

**STAFF**

**Carlos Medina, MD, Division Head**

**Jill Bernstein MD, FAAP**

**Anne Dudley, MD**

**Israel Franco, MD, FAAP, FACS**

**Adam Hittelman, MD**

**Howard Hochman, MD**

**Courtney Rowe, MD**

**Katherine Herbst, MSc**

*The Pediatric Residency program continued with its uninterrupted record of full, continuing accreditation, with no areas of concern or citations from the Pediatric Review Committee of the Accreditation Council for Graduate Medical Education (ACGME).*

The program continued to successfully recruit high-quality residents. Entering residents had an average of 2.9 scholarly activities and 7.9 community service activities prior to matching. Graduates were, once again, placed in competitive fellowship programs and outstanding practices. The program first-attempt pass rate on the American Board of Pediatrics certifying examination increased once again, and it is comfortably meeting the required pass rate for accreditation. ACGME surveys and program surveys of faculty and residents were notably positive, but they also provided the identification of areas of focus for program development.

**Program improvements were planned and implemented during the year:**

In response to the requirement to have faculty and residents aware of key indicators of the quality of care for the populations they serve, metrics were identified, tracked and distributed to residents and faculty for Connecticut Children's inpatient services and ambulatory pediatrics. As a result, the 2018 resident

survey showed improvement from below to above average (57 percent to 86 percent), compared to the national responses regarding compliance in this area (70 percent). We partnered with the Quality Improvement Department in disseminating data quarterly to faculty and residents by emailing SNAP reports, comparing various hospital quality metrics to applicable national benchmarks, and we identified Community Health Center (CHC) ambulatory quality metrics as well.

The balance of service and education was addressed: Rounding time was reorganized for clinical teaching about hospitalized patients, faculty role modeling of rounding, and patient/family engagement. As a result, for 2018, residents reported their education was not compromised by service obligations almost all of the time. Further faculty development on family centered rounds and education on rounds was done. A revised discharge summary was implemented, and it doubled as the final progress note. This saved significant time needed for documentation, and provided more time for meaningful participation in direct care. The Back to Bedside (B2B) residents continued working on a bundle of strategies to enhance meaningful participation in care, including an improved handover tool and progress note and better communication around transitions of care. Commitment to further improve clerical support was secured.

Work continued on evaluation timeliness: Timeliness of evaluations of residents by faculty continued to improve, incentivized by





shared reporting of completion and gift cards for high performers. This continues to be an area for ongoing improvement, and the content of evaluations will be considered in efforts going forward.

**Aims for the program were developed to use in the accreditation process and to coordinate with the Department of Pediatrics strategic plan:**

The Pediatric Residency Program will be able to offer participants experiences that can prepare them well for any of the career possibilities in Pediatrics. Many programs are conducted in ways that emphasize and prepare their graduates for one or two outcomes rather than other possibilities. The University of Connecticut Pediatric Residency Program will continue to strive to provide the broadest possible spectrum of core and discretionary activities to allow its graduates to take advantage of any opportunities they might choose. Its graduates' career choices historically have reflected this intent, and it is the aim of the program to sustain its "pluripotential" educational experience as the landscape of Pediatrics evolves.

The Pediatric Residency Program will offer a resident learning environment that promotes wellness and reduces burnout to sustain wellness and meaning in residents' professional and personal lives throughout their careers. The Pediatric Residency Program will embrace the challenge of creating a learning environment that promotes wellness through proper self-care, connectedness, and meaning in work. Residents will learn to maintain their health and well-being and to renew themselves in the face of the challenges their profession brings them. They will experience and learn the value of connectedness with their fellow pediatricians, interprofessional team members, and others in their personal lives. They will learn to bring meaning to their professional and personal lives through thoughtful and innovative changes in the conduct of their activities.

The Pediatric Residency Program graduates will be able to advocate effectively for their patients and families, and for the populations they serve during their residency experience and throughout their careers. Pediatric Residents will be educated in a way that increases their chances of accepting responsibility and acting in ways that reach beyond the provision of care, to address the social determinants of health for the individual patients and families served and for the populations they serve as a whole. The program will create this expectation for all residents through the core community longitudinal experience, and it will promote those whose career focus is advocacy for the highest possible level of community and child health through the continued advancement of the advocacy pathway.

Graduates of the program will acquire advanced skills and ability in quality improvement and safety activities. The Pediatric Residency Program will continue to develop and promote a strong resident commitment to reduce error and harm, and to promote the highest quality of care possible. Residents will continue demonstrating the acquisition of knowledge in these areas as reflected on their standard examinations, but more importantly, they will actively identify safety opportunities and participate in addressing them.

The program is being organized to improve resident ability to identify potential research mentors, and to enhance the perception of the environment of inquiry within the residency program.

To enhance the resident awareness of research opportunities and their ability to pursue them, Dr. Sharon Smith continues her efforts to forge ahead with resident scholarship. A searchable database was developed and disseminated, maintaining a list of faculty willing to mentor resident research, and their areas of interest. This also has resulted in a listing of rotation and division-specific scholarly activities for resident access on our CTHusky (Blackboard) curricular site. There also has been dissemination of the highlights of resident scholarly achievements, to help stimulate interest in and honor their accomplishments. Resident participation in research continues to increase, with more participation documented in the four-week Research Methods rotation under the leadership of Dr. Smith. There was such an increase of interest that the program had to sustain the number of rotations offered during the year at six.

**Pediatric Residents by Level, 2017-18**

*PL-1*

- Eliyahu Akerman, MD**
- Lauren Boudreau, DO**
- Nayla Boulad, DO**
- Alexa Goldfarb, DO**
- Jessica Gordon, MD**
- Daniel Gustkey, DO**
- Lauren Iacono, DO**
- Solborg Ingvarsdottir, MD**

- Sarah Mackey, DO**
- Amy Miller, MD**
- Andres Moreno, MD**
- Erin Pastor, DO, MS**
- Amritha Patel, MD**
- Shaheen Rangwalla, DO**
- Carolyn Ranten, DO**
- Esther Son, DO**
- John Sooy, MD**
- Paul Tomlinson, DO**
- Scott Treece, MD**
- Jonathan Uhl, MD**
- Divya Vangala, MD, MA**

*PL-2*

- Amy Blodgett, MD**
- Noah Buncher, DO**
- Jessica Fennell, MD**
- Nicole Fersa, DO**
- Joshua Goldman, MD**
- Erin Goode, DO**
- Shilpa Guntaka, MD**

- Kristin Brooke Hallett, MD**
- Owen Kahn, MD**
- Kaitlin Keenan, DO**
- Abraham Khorasani, MD**
- Danielle Klima, DO**
- Sarah Kollar, DO**
- Neetu Krishnan, DO**
- Chelsea Lepus, DO**
- Catherine Paczek, DO**
- Usha Prasad, DO**
- Katarzyna Saar, DO**
- Jessica Sanchez, MD**
- Chelsea Wells, DO**

*PL-3*

- Caroline Amin, MD**
- Peggy Chen, MD**
- Roxanne Cheung, MD**
- Sigfus Kristinn Gunnlaugsson, MD**
- Anjali Gupta, MD**
- Rebecca Kohlberg-Davis, MD**
- Jonah Mandell, DO**

- Justine Mrosak, MD**
- Dana Nezon, MD**
- John Norko, MD**
- Nisha Patel, MD**
- Jenny Petruskas, MD**
- Agnes Reschke, MD**
- Sara Soshnick, DO**
- Jessica Tutolo, MD**
- Carolina Vega, MD**
- Emily Anne Sampino, MD**
- Caleb Wasser, DO**
- Jonathan Wong, DO**

**Chief Residents**

- Emily Biddick, MD**
- Crista Cerrone, MD**
- Sarah Germani, MD**







*The University of Connecticut School of Medicine-sponsored graduate medical education (fellowship) programs at Connecticut Children's Medical Center continue to graduate exceptionally trained specialty physicians who enter practice throughout the country. Our fellows continue to be awarded funding for exciting research projects, with numerous accepted presentations at national scientific meetings, in addition to travel grants and awards. The success of our fellowship programs would not be possible without the dedication and efforts of our fellowship manager and coordinators: Marianne Custer, manager; Lindsay Haythorn, Amanda Ross, and Kierstyn Callahan, coordinators.*

#### **Pediatric Anesthesiology**

Led by Dr. Michael Archambault, the Pediatric Anesthesiology Fellowship Program entered its third year of accreditation in 2018 and graduated its first fellow, Dr. Thomas Manning, in June 2018. Dr. Manning is a native of Connecticut. He completed medical school in Nebraska at Creighton University and residency at the University of Nebraska. He was an excellent addition to the department. He presented at a multidisciplinary surgical morbidity and mortality conference and collaborated with Drs. Christina Biello and Jonathan Martin on a research project investigating minimally invasive surgery for craniosynostosis. Additionally, with Drs. Archambault and otolaryngologist Katherine Kavanagh, he presented a poster, "Crisis Resource Management (CRM) Simulation Training During Anesthesiology Residency: Do Non-technical Skills Transfer Into Independent Practice? A Pilot Study," at the American Society of Anesthesiology annual meeting.

After a successful site visit in late 2017, the program received ACGME continued accreditation for another year. Because the 2019-20 application class for Pediatric Anesthesia was again smaller than in previous years, the program did not match and is continuing to recruit a fellow for a July 2019 start date.

#### *Fellow Publications*

Martin JE, **Manning T**, Bookland M, Castiglione C. Performance of minimally invasive sagittal synostectomy with supine patient positioning: technical note. *J Neurosurg Pediatr.* 2018 Oct; 22(4):344-7. doi: 10.3171/2018.5.PEDS18200. Epub 2018 Jul 20.

#### **Pediatric Emergency Medicine**

Led by Dr. Matt Laurich, the Pediatric Emergency Medicine Fellowship is in its 19th year. It is a three-year fellowship with two fellows per year.

Dr. Laurie Malia graduated from the fellowship in June 2018 and accepted a fellowship position in Pediatric Emergency Ultrasound at New York-Presbyterian Morgan Stanley Children's Hospital at Columbia University in New York, NY. Dr. Malia joined the Emergency Medicine Division in November 2015 after having completed her residency here at Connecticut Children's. Her case report, "Cold Panniculitis Following Ice Therapy for Supraventricular Tachycardia," was published in *Pediatric Emergency Care* in April 2018. Her prospective observational study, "Adverse Event and Satisfaction with Use of Intranasal Midazolam for Emergency Department Procedures in Children," was presented as a poster at the Pediatric Academic Societies meeting in Toronto, Canada, in May of 2018, and published in the *American Journal of Emergency Medicine*. Her prospective observational study, "Diagnostic Accuracy of Laboratory and Ultrasound Findings in Patients with a Non-visualized Appendix," was published in the *American Journal of Emergency Medicine* in August 2018.

Dr. Hannah Sneller graduated from the fellowship in June 2018 and accepted a Pediatric Emergency Medicine attending position at the University of Nebraska in her hometown of Omaha. Dr. Sneller became part of the division in July 2015, arriving from Stony Brook Children's Hospital in Stony Brook, NY, where she completed her pediatric residency and chief residency. Dr. Sneller's study, "The Modified Pulmonary Index Score Predicts Admission from the Pediatric Emergency Department," was presented at the Society for Critical Care Medicine meeting in San Antonio, TX, in February 2018, as well as at the Pediatric Academic Societies meeting in Toronto, Canada, in May of 2018. The manuscript has been submitted for publication. Dr. Sneller's quality improvement project, "Improving Time to Delivery of Systemic Corticosteroids in Patients Presenting to the ED with Moderate to Severe Asthma Exacerbations," was presented at multiple venues including as a platform presentation at the Eastern Society of Pediatric Research meeting in Philadelphia, PA, in March 2018, and the New England Regional Pediatric Emergency Medicine Fellows' Conference in March 2018, and as a poster at the Pediatric Academic Societies meeting in Toronto, Canada, in May 2018. The project won second prize at UConn Health's Symposium on Patient Safety & Continuous Quality Improvement in June 2018. In addition, Dr. Sneller published two case reports, "Lemierre's Syndrome Presenting as Multifocal Pyomyositis in a Young Child," in the *Journal of Pediatric Infectious Disease*, in May 2018, and "Acute Hemorrhagic Edema of Infancy with Associated Hemorrhagic Lacrimation" in *Pediatric Emergency Care* in August 2018.

Dr. Noah Jablow joined the program in July 2016 from Stony Brook Children's Hospital. He has several projects ongoing including a prospective study of the test characteristics of automated point-of-care urinalysis and a survey study of pediatric emergency department patients regarding reasons for seeking care in the Emergency Department (ED).

Dr. Tasha Desai joined the program in July 2016, arriving from the Children's Hospital at Lehigh Valley Health Network in Allentown, PA. She has several projects underway including a study of opiate prescribing patterns in the Pediatric Emergency Department and patient opiate prescription-filling patterns for pediatric patients in the state of Connecticut. Her project, "An Objective Approach to Identifying Opportunities for Preventing Ingestions Among Youth in Connecticut," was presented at the Eastern Society of Pediatric Research in March 2018.

Dr. Jacob Greenberg joined the program in July 2017 from Maimonides Infants' and Children's Hospital of Brooklyn, NY. Dr. Greenberg is working on multiple research projects including study of the novel use of bedside ultrasound to confirm naso-gastric tube placement, a survey of adolescent patients in the Emergency Department on risk-taking behavior and health education, and a retrospective study on the impact of formal crisis prevention training on reducing the use of physical and chemical restraints in the ED. Dr. Greenberg also is involved in several quality improvement projects. His project on the use of

a nasogastric tube for hydration in bronchiolitis won third prize at UConn Health's Symposium on Patient Safety & Continuous Quality Improvement in June 2018.

Dr. Prina Patel joined the program in July 2017 from Winthrop University Hospital in Mineola, NY. Dr. Patel is working on several projects including the impact of rapid point-of-care testing for influenza on resource utilization and Emergency Department management, and another project on the test characteristics of radiography for evaluating possible neck infections in the ED.

The program welcomed two excellent new fellows in July 2018. Dr. Ruchika Jones completed the pediatric residency program at Stony Brook Children's Hospital followed by chief residency at Jersey Shore University Medical Center of New Jersey where she then worked as an attending in the pediatric emergency department as well as serving as associate residency program director. Dr. Rahul Shah completed his pediatric residency at Yale New Haven Hospital in New Haven, CT.

In December 2018, the program successfully matched two future fellows who will start in July 2019. Dr. Owen Kahn will join the program after completing the University of Connecticut Pediatric Residency Program at Connecticut Children's Medical Center in Hartford, CT. Dr. Candice Williams will join us in July 2019 following completion of the pediatric residency program at Westchester Medical Center in Valhalla, NY.

#### *Fellow Publications*

**Sneller H**, Vega C, Zemel L, **Chicaiza HP**. Acute hemorrhagic edema of infancy with associated hemorrhagic lacrimation. *Pediatr Emerg Care.* 2018 Aug 14. [Epub ahead of print]

**Malia L**, Laurich VM, Sturm JJ. Adverse events and satisfaction with use of intranasal midazolam for emergency department procedures in children. *Am J Emerg Med.* 2018 Apr. [Epub ahead of print]

**Malia L**, Sturm JJ, Smith SR, Brown RT, Campbell B, Chicaiza H. Diagnostic accuracy of laboratory and ultrasound findings in patients with a non-visualized appendix. *Am J Emerg Med.* 2018 Aug 7. [Epub ahead of print]

**Malia L**, Wang A, Scheiner L, Laurich VM. Cold panniculitis following ice therapy for supraventricular tachycardia. *Pediatr Emerg Med.* 2018 Apr. [Epub ahead of print]

**Kasmire KE**, Vega C, Bennett NJ, Laurich VM. Hypothermia: a sign of sepsis in young infants in the ED? *Pediatr Emerg Med.* 2018 Aug. [Epub ahead of print]

#### *Book Chapters*

**Malia L**, Silverman A. Pulseless electrical activity. In: Fleischer and Ludwig's 5-Minute Pediatric Emergency Medicine Consult. New York: Wolters Kluwer Health/Lippincott Wilkins & Wilkins 2018.



### Pediatric Gastroenterology

Led by Dr. Bella Zeisler and associate program director Dr. Melissa Fernandes, the fellowship program in Pediatric Gastroenterology is in its seventh year. Dr. Zeisler assumed the role of program director in July 2018 following the program's leadership by Dr. Wael Sayej who was instrumental in building the fellowship into a successful program.

The program graduated its fifth fellow, Dr. Angela Pressley-Walace, in August 2018. She accepted a position as a Pediatric Gastroenterologist in a private practice in Gulfport, MI.

Our third year fellow, Dr. Temara Hajjat is working with Dr. Jeffrey Hyams on a project to determine the correlation of fecal calprotectin and Remicade levels in patients receiving Remicade infusions for inflammatory bowel disease. She presented an abstract from the multicenter PROTECT study about pediatric inflammatory bowel disease at Digestive Disease Week® (DDW) in the spring of 2018 and will be presenting additional research on inflammatory bowel disease at DDW 2019.

Our second year fellow, Dr. Andrew Fondell, started his research experience in health economics and inflammatory bowel disease in 2018 and his primary research mentor is Dr. Hyams. Dr. Fondell's work centers on the economic impact of a new diagnosis of inflammatory bowel disease on our patients as well as the health care system.

Dr. Joelynn Dailey joined the program in July 2018. She completed her residency at Lehigh Valley Hospital in Pennsylvania. Her medical school education was undertaken at Philadelphia College of Osteopathic Medicine. Dr. Dailey started her first research rotation in November 2018 and will transition to working on her research in July 2019. She is currently determining the focus of her research project and will have a second research month in March 2019 to help her finalize her research project and establish goals and a timeline for her months as a primary research fellow.

In December 2018, the program successfully matched Dr. Chelsea Lepus who will join the program in July 2019 after completing her residency here at the University of Connecticut/Connecticut Children's Medical Center. She completed her medical school education at Lake Erie College of Osteopathic Medicine.

### Pediatric Endocrinology

Led by Dr. Rebecca Riba-Wolman, the Pediatric Endocrinology Fellowship is now in its 21st year. Dr. Riba Wolman assumed the role of program director in July 2017. Dr. Christine Trapp joined as assistant fellowship director in October 2018.

We continue to be successful in recruiting excellent fellows in an environment of decreasing applications to the subspecialty. Graduates of our fellowship program have had a 100% pass rate at first attempt on the pediatric endocrinology boards, and

are engaged in meaningful research experiences mentored by well-published, NIH-funded investigators in basic and translational research. Our fellows have continued to receive awards and travel grants to attend national meetings to present their work. We continue to place fellows in academic positions upon graduation.

Dr. Massiel Mojica Sarmiento joined us from Lincoln Medical and Mental Health Center in Bronx, NY, in July 2016. Her area of interest is in genetic forms of childhood obesity, and she continues her work under the mentorship of Drs. Emily Germain-Lee and Christine Trapp on defining the temporal pattern of obesity onset in a population of patients with pseudohypoparathyroidism Type 1a. She has presented this work at the Pediatric Endocrine Society National Meeting in 2018, and is working on manuscript submission.

Dr. Whei Ying Lim joined us from Hurley Medical Center in Michigan in July 2017. Her area of interest is type 1 diabetes mellitus, and she continues her work on the role of the stool microbiome on the development of type 1 diabetes in pediatric patients. Her work is under the mentorship of Drs. Cem Demirci and Derya Unutmaz (The Jackson Laboratory for Genomic Medicine). She has received two highly sought after awards through the national organizations of the Pediatric Endocrine Society and the Endocrine Society. She has also been invited to present at the European Professional Association for Transgender Health.

Dr. Komalben Parmar joined us from Hurley Medical Center in Michigan in July 2018. Her research interests have developed over her first clinical year of fellowship, and she is anticipating work regarding glucose homeostasis with a member of the institution.

In December 2018, the program successfully matched Dr. Neetu Krishnan who is an internal recruitment from our Pediatric Residency at Connecticut Children's Medical Center/University of Connecticut. Dr. Krishnan will join the program in July 2019.

### Fellow Publications

**Sarmiento MS**, Trapp CM, Germain-Lee E. Weight trajectory in infants with pseudohypoparathyroidism type 1A. Pediatric Endocrine Society Meeting, April 2018. Toronto, Canada.

### Medical Genetics

Led by Dr. Joseph Tucker, MD, and associate program director, Brittany Gancarz, CGC, the Medical Genetics and Genomics Fellowship Training Program has been training clinical medical geneticists since the program was first accredited in 1997. Robin Schwartz, MS, CGC, retired from the program and her position as associate program director in 2018. Future development of the program involves plans to expand through the hire of two additional clinical geneticists, the development of an Undiagnosed Diseases program in collaboration with Jackson Laboratories in Farmington, CT, and recruitment of a new division chief.

Dr. Jaclyn Beirne will graduate at the end of this academic year and plans to stay on as faculty at UConn Health and Connecticut Children's Medical Center as a medical geneticist. Her research poster, "A de novo KIF11 Pathogenic Variant in a Patient with Microcephaly and Failure to Thrive," was accepted and will be presented at the American College of Medical Genetics and Genomics (ACMG) Annual Clinical Medical Genetics Meeting in April 2019.

### Pediatric Infectious Diseases

The Pediatric Infectious Diseases Fellowship Program is led by Dr. Nicholas Bennett and is in its second year. In this era of antibiotic-resistance and new hospital standards, the program has a focus on training the next generation of antimicrobial stewards. The program also seeks to train fellows in practical clinical immunology, including the management of children with primary immune deficiencies and HIV infection.

Because the 2019-20 application class for pediatric infectious diseases was smaller than in previous years, the program did not match and is continuing to recruit a fellow for a July 2019 start date.

### Pediatric Hematology-Oncology

The Pediatric Hematology-Oncology Fellowship Program is led by Dr. Andrea Orsey and is entering its second year as a newly accredited program. Dr. Orsey was accepted to begin the Harvard Macy Institute Program for Health Professionals in January 2019. Through the program, she will be improving the quality of the Pediatric Hematology-Oncology Fellowship Program education.

In July 2018, the program welcomed its first fellow, Dr. John Norko, who completed both his pediatric residency and medical school education at the University of Connecticut/Connecticut Children's Medical Center. Dr. Norko is interested in genetic and immunologic aspects of pediatric cancer. He is exploring research opportunities and will finalize his research project by June 2019. In December 2018, the program successfully matched Dr. Tatiana Ospina who will join the program in July 2019 after completing her residency at Lincoln Medical and Mental Health Center in Bronx, NY. Her medical school education was completed at Universidad Pontificia Bolivariana Facultad de Medicina in Columbia.

### Neonatal-Perinatal Medicine

Led by Dr. Jennifer Trzaski, the fellowship program in Neonatal-Perinatal Medicine continued its outstanding record of academic accomplishment and scholarly productivity. In the 45 years since accreditation, 67 fellows have graduated from the program.

Maushumi Assad, MD, MPH, completed the fellowship in June 2018 and accepted a neonatology attending position at Winchester Hospital in Winchester, MA. Prior to graduating in June 2018, she presented her research to the Eastern Society for Pediatric Research in Philadelphia in March 2017, the Southern



Regional meeting in New Orleans in February 2017, the Pediatric Academic Societies in San Francisco in May 2017, and at the American Academy of Pediatrics 91st Perinatal and Developmental Symposium in Bonita Springs, FL, in November 2017. Dr. Assad received Eastern Society for Pediatric Research Meeting and Pediatric Academic Society Meeting travel grant awards for her research.

Susan Pitts, DO, completed the fellowship in June 2018 and accepted a Neonatology attending position at Mercy Hospital in Joplin, MO. Prior to graduating in June 2018, she presented her research to the Eastern Society for Pediatric Research in Philadelphia in March 2017, the American College of Osteopathic Pediatricians Osteopathic Medical Conference and Exposition in Philadelphia in October 2017, the New England Perinatal Society in March 2018, the BYCONN conference in March 2018, and at the Pediatric Academic Societies in Toronto, Canada, in May 2018.

Third-year fellow Jennifer Caldwell, MD, MS, presented her research to the Eastern Society for Pediatric Research in Philadelphia in March 2017 and to the Pediatric Academic Societies in San Francisco in May 2017. Dr. Caldwell received an award at Eastern Society for Pediatric Research Meeting for her research.

Second-year fellow Dr. Betté Ford's area of scholarly interest is in neonatal resuscitation. She is particularly interested in improving resident education and experience in the delivery room. She is working with mentors Jennifer Trzaski, MD, and James Hagadorn, MD, in the Division of Neonatology. She presented her research at the Innovations conference in San Diego, CA, in June, 2018. Dr. Ford was also selected to attend the American Academy of Pediatrics conference for first-year neonatal-perinatal medicine fellows in Santa Fe, NM, in June, 2018.

Second-year fellow Dr. Rachel Koski's research interest is in neuroscience focusing on globoid cell leukodystrophy (Krabbe's disease). She is pursuing this basic science research project in the lab of Dr. Stephen Crocker at UConn Health. Dr. Koski presented her research at the Innovations conference in San Diego, CA, in June 2018.



Dr. Aditya Chhikara joined the program in July 2018 from New York-Presbyterian Brooklyn Methodist Hospital in Brooklyn, NY.

Dr. Mishika Malik joined us in July 2018 from Southern Illinois University in Springfield, IL.

In December 2018, the program successfully recruited Dr. Poonam Thakore who will join the program in July 2019 after completing her residency at Tulane University Health Sciences Center in New Orleans, LA. Dr. Thakore completed her medical school education at Tver State Medical Academy in Russia.

#### Fellow Publications

**Lindberg TP**, Caimano MJ, Hagadorn JI, Bennett EM, Maas K, Brownell EA, Matson AP. Preterm infant gut microbial patterns related to the development of necrotizing enterocolitis. *J Matern Fetal Neonatal Med.* 2018 Jul 18:1-10. PMID 29909714.

**Johnson KR**, Hagadorn JI, Sink DW. Reducing alarm fatigue in two neonatal intensive care units through a quality improvement collaboration. *Am J Perinatol.* 2018 Nov; 35(13):1311-8. doi: 10.1055/s-0038-1653945. Epub 2018 May 21. PMID 29783270.

#### Pediatric Orthopaedic Surgery

Led by Dr. Mark Lee, the Pediatric Orthopaedic Surgery Fellowship is entering its fifth year of formal ACGME accreditation. The program has thus far graduated three fellows who are currently in independent practice.

Alvin Wei-I Su, MD, PhD, graduated from the program in July 2018 and accepted a Pediatric Orthopaedic Surgery attending position with subspecialty in Sports Medicine at Alfred I. Dupont Children's Hospital in Delaware. During his fellowship, he worked on optimizing operating room efficiency for management of supracondylar humerus fractures, and he continued biomechanics research begun prior to fellowship. He received a scholarship to the 2017 annual International Pediatric Orthopaedic Symposium in Orlando, FL. He also presented a poster on operating room efficiency at the annual Pediatric Orthopaedic Society of North America meeting in 2018.

Fred Xavier, MD, PhD, joined the program in October 2018 upon completing a fellowship in adult spine surgery at Dalhousie University in Nova Scotia, Canada. He resigned from the program in December 2018 to change his overall clinical focus.

The Pediatric Orthopaedic Fellowship accepted a new fellow outside of the formal match for the 2019-2020 year. We look forward to working with Dr. Harshad Patel beginning August 2019 following her completion of a Pediatric Orthopaedic fellowship at Duke University in North Carolina.

#### Fellow Publications

**Su AW**, Storey EP, Lin SC, Forst B, Lawrence JT, Ganley TJ, Wells L. Association of the graft size and arthrofibrosis in young

patients after primary anterior cruciate ligament reconstruction. *J Am Acad Orthop Surg.* 2018 Dec 1; 26(23):e483-e489.

**Su AW**, Chen Y, Dong Y, Wailes DH, Wong VW, Chen AC, Cai S, Bugbee WD, Sah RL. Biomechanics of osteochondral impact with cushioning and graft insertion: cartilage damage is correlated with delivered energy. *J Biomech.* 2018 May 17; 73:127-136.

**Su AW**, Chen Y, Wailes DH, Wong VW, Cai S, Chen AC, Bugbee WD, Sah RL. Impact insertion of osteochondral grafts: interference fit and central graft reduction affect biomechanics and cartilage damage. *J Orthop Res.* 2018 Jan; 36(1):377-86.

#### Pediatric Pulmonology

Led by Dr. Craig Schramm, the Pediatric Pulmonology Fellowship is in its 28th year. Because our program is relatively small, division members are able to provide individualized training for our fellows. Each of our graduated fellows has a career in academic pediatric pulmonary medicine.

Dr. Jamie Harris joined the program in July 2018 after completing his residency at Advocate Lutheran General Hospital in Illinois. Dr. Harris is broadly interested in pediatric pulmonary problems, especially cystic fibrosis. He will have his first research rotation in January 2019, and will begin working on a specific project in July 2019.

#### Pediatric Surgery

Led by Connecticut Children's surgeon-in-chief and program director Dr. Christine Finck and associate program director Dr. Richard Weiss, the fellowship program in Pediatric Surgery is in its seventh year. To date, three fellows have graduated from the program and have gone on to successful practices in Eugene, OR, Hershey, PA, and Chicago, IL.

The program's current fellow, Dr. James Healy, has a basic science background in the molecular genetics of endocrine tumors, and a strong interest in clinical quality improvement (QI) initiatives within Pediatric Surgery including: risk assessment, collaborative implementation, trials of best practices, and design of workforce education to achieve clinical improvement (including resident education). This interest extends to include the application of QI techniques to global surgery initiatives to improve quantification of impact and mathematical validation of social and economic benefit of health care spending in low- and middle-income nations. He is interested in the intersection of this quality improvement work with public policy, and the influence political initiatives have upon pediatric health.

In May 2018, the program successfully matched Dr. Katerina Dukleska who will join the program in August 2019. Dr. Dukleska will be completing her residency at Thomas Jefferson University Hospitals in Philadelphia, PA. Dr. Dukleska completed her medical school education at Rutgers New Jersey Medical School in New Jersey.



#### Fellow Publications

Ahle SL, **Healy JM**, Pei KY. Prediction of postoperative surgical risk: a needs assessment for a medical student curriculum. *J Surg Educ.* 2018 Aug 9. pii: S1931-7204(18)30282-4. doi: 10.1016/j.jsurg.2018.07.011. PMID: 30100325.

Chiu AS, Jean RA, Hoag JR, Freedman-Weiss M, **Healy JM**, Pei KY. Association of lowering default pill counts in electronic medical record systems with postoperative opioid prescribing. *JAMA Surg.* 2018 Nov 1; 153(11):1012-9. doi: 10.1001/jamasurg.2018.2083. PMID: 30027289.

Lopez CM, **Healy JM**, Ozgediz DE. Obstructed paraduodenal hernia. *J Gastrointest Surg.* 2018 Jun 29. doi: 10.1007/s11605-018-3848-0. PMID: 29959640.

Yap A, Muzira A, Cheung M, **Healy J**, Kakembo N, Kisa P, Cunningham D, Youngson G, Sekabira J, Yaesoubi R, Ozgediz D. A cost-effectiveness analysis of a pediatric operating room in Uganda. *Surgery.* 2018 Nov; 164(5):953-9. doi: 10.1016/j.surg.2018.03.023. Epub 2018 May 23. PMID: 29801729.

Pei KY, **Healy J**, Davis KA. Surgeons overestimate postoperative complications and death when compared with the National Surgical Quality Improvement Project risk calculator. *J Surg Res.* 2018 May; 225:95-100. doi: 10.1016/j.jss.2018.01.008. Epub 2018 Feb 21. PMID: 29605041.

#### STAFF

##### Program Leadership

**Marianne Custer, BS, C-TAGME**  
*Fellowship Program Manager*

##### Program Coordinators

**Lindsay Haythorn**  
*Emergency Medicine, Infectious Diseases, Pulmonology, General Surgery*

**Amanda Ross**  
*Anesthesiology, Endocrinology, Neonatal-Perinatal Medicine, Orthopaedic Surgery*

**Kierstyn Callahan**  
*Hematology-Oncology, Gastroenterology, Medical Genetics*

#### PEDIATRIC ANESTHESIOLOGY

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*Program Director*  
**Thomas Manning, MD**

#### PEDIATRIC EMERGENCY MEDICINE

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**Laurie Malia, DO**  
**Hannah Sneller, MD**



Noah Jablow, MD  
Tasha Desai, DO  
Noah Jablow, MD  
Prina Patel, MD  
Ruchika Jones, MD  
Rahul Shah, MD

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Program Director  
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Associate Program Director  
Massiel Sarmiento, MD  
Whei Ying Lim, MD  
Komalben Parmar, MD

#### PEDIATRIC GASTROENTEROLOGY

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Wael Sayej, MD  
(2013-2018), Program Director  
Melissa Fernandes, MD,  
Associate Program Director  
Angela Pressley-Wallace, MD  
Temara Hajjat, MD  
Andrew Fondell, MD  
Joelynn Daily, DO

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Program Director  
Brittany Gancarz, CGC,  
Associate Program Director (starting July 2018)  
Robin Schwartz, MS, CGC,  
Associate Program Director (1997-2018)  
Jaclyn Beirne, MD

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Program Director  
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Program Director  
Maushumi Assad, MD  
Susan Pitts, DO  
Jennifer Caldwell, MD, PhD  
Betté Ford, MD  
Rachel Koski, MD  
Mishika Malik, MD  
Aditya Chhikara, MD

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#### PEDIATRIC SURGERY

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Program Director  
Richard Weiss, MD,  
Associate Program Director  
James Healy, MD







The Office of Grants and Sponsored Program (OGSP) partners with faculty and staff to provide the highest quality research administration at all stages of sponsored projects, from identifying funding sources through award closeout. OGSP facilitates activities within the research community as Connecticut Children's continues to position itself to become a leading research children's hospital.

The Office of Grants and Sponsored Programs (OGSP) continues to assist and support Connecticut Children's investigators and staff with applying for, procuring, and managing extramural funding, and ensures compliance with the policies and regulations of Connecticut Children's, its sponsors, and federal and state oversight agencies. In addition, the OGSP Contracts Office negotiates and processes all agreements related to research and sponsored programs, and issues all contracts for research-related collaborations, material transfers, and data sharing. In 2018, OGSP managed a \$30M portfolio that included \$11.1M in new awards, submitted 78 proposals, and processed 588 contracts.

In 2018, OSGP welcomed both a new director Ms. Maria Soliman, who was recruited from the Levine Cancer Institute in Charlotte, NC, where she was director of research administration. She brings more than 20 years of experience in research administration for federal, state, and pharmaceutical grants and trials. Her research experience includes implementation of financial and clinical-trial management systems, auditing and implementing billing-compliance programs, and improving research-billing revenue-cycle processes. She is actively involved with the Society of Research Administrators International, serving on the Society's Educational and Professional Development sub-committees for Financial Management and Clinical and Translational Research.

**STAFF**

**Annamarie Beaulieu, MPH**  
Senior Director, Academic Affairs, Continuing Medical Education, Office of Grants and Sponsored Programs

**Maria Soliman, Director**

**Terry Dehnel, Director**  
(through July 2018)

**Kimberly Davey, Senior Manager,**  
Grant Programs and Research Financial Administration

**Neal Breen, Central Grants Manager**

**Lisa Butler, Manager, Contracts**

**Gena Dixon,**  
Departmental Associate Grants Management Specialist

**Mary Ellen Foran,**  
Clinical Trials Associate Grants Management Specialist

**Lea Ann Fortin McCue,**  
Contract Administrator

**Lora Frascarelli,**  
Central Associate Grants Management Specialist

**Laura Friedeberg,**  
Departmental Grants Management Specialist

**Kathy Lawrence,**  
Administrative Assistant

**Brenda Pillot,**  
Departmental Associate Grants Management Specialist

**Aubree Siebert,**  
Clinical Trials Associate Grants Management Specialist

**Marlene Tzickas,**  
Central Associate Grants Management Specialist

**Cristen Yakush,**  
Associate Grants Management Specialist

Activity #	Principal Investigator	Award/Study Title	Funding Source Primary/(Secondary)	Award Start Date	Award End Date	Total Award or Revenue (Clinical Trials)	Award Year of	Subcontract to UCHC/CCMC?	Amount of Subcontract
180380	Acsadi, Gyula	Muscular Dystrophy Care Center	Muscular Dystrophy Association	1/1/17	12/31/19	60 000	2 of 3	n/a	n/a
180840	Acsadi, Gyula	Biogen ISIS 396443	Biogen Idec MA, Inc	9/1/15	9/30/50	122 540		n/a	n/a
180862	Acsadi, Gyula	Sarepta 4045-301	Sarepta Therapeutics, Inc	10/18/17	9/30/50			n/a	n/a
180865	Acsadi, Gyula	Italfarmaco DSC/14/2357/48	Italfarmaco S.P.A.	9/15/17	9/30/50	25 300		n/a	n/a
180870	Acsadi, Gyula	SHINE - ISIS 396443	Biogen Idec MA, Inc	7/5/18	9/30/50	11 299		n/a	n/a
179372	Bennett, Nicholas	Registry of Patients With Primary Immune Deficiency Disorders	United States Immunodeficiency	9/30/14	9/30/50	-		n/a	n/a
180821	Bennett, Nicholas	A Multicenter, Randomized, Double-Blinded Comparative Study to Evaluate the Efficacy, Safety, and Pharmacokinetics of Daptomycin Versus Active Comparator in Pediatric Subjects With Acute Hematogenous Osteomyelitis Due to Gram-Positive Organisms	Cubist Pharmaceuticals, Inc	11/22/13	9/30/50	29 904		n/a	n/a
180831	Bennett, Nicholas	A Phase 1, Open Label, Single Dose Study to Investigate the Pharmacokinetics, Safety and Tolerability of Dalbavancin in Hospitalized Children Aged 3 Months to 11 Years Receiving Standard Intravenous Anti-Infective Treatment for Bacterial Infections	Durata Therapeutics International, BV	8/22/14	9/30/50	-		n/a	n/a
180849	Bennett, Nicholas	Pharmacokinetics of a Single-Dose of Dalbavancin in Preterm Neonates to Infants Ages 3 Months With Suspected or Confirmed Bacterial Infection	Allergan Sales, LLC	9/6/16	9/30/50	15 160		n/a	n/a
180851	Bennett, Nicholas	A Prospective, Open-Label Study to Assess the Pharmacokinetics, Safety & Efficacy of Anidulafungin When Used to Treat Children With Invasive Candidiasis, Including Candidemia	Pfizer, Inc.	9/22/16	9/30/50	11 000		n/a	n/a
180855	Bennett, Nicholas	Expanded Access IND Program (EAP) to Provide Stamaril Vaccine to Persons in the United States for Vaccination Against Yellow Fever	Sanofi Pasteur	6/15/17	9/30/50	7 760		n/a	n/a
180866	Bennett, Nicholas	Baxalta HYQVIA 161503	Baxalta	12/7/17	9/30/50				
	Bookland, Marcus	CT Brain Tumor Alliance	CT Children's-MOU	10/1/16	N/A	39 782			
179464	Boruchov, Donna	Community Counts	CDC / Boston Children's Hospital	9/30/17	9/29/19	45 782	2 of 3	n/a	n/a
179679	Boruchov, Donna	Sickle Cell Disease 2018-2019	CT / DPH (Hospital for Special Care)	7/1/18	6/30/19	19 097	1 of 1	n/a	n/a
180265	Boruchov, Donna	ATHN - My Life Our Future	ATHN	1/1/14	9/30/50	2 450		n/a	n/a
180427	Boruchov, Donna	Health for Sickle Cell Disease	The Children's Hospital of Philadelphia	3/1/18	2/28/19	90 345	1 of 1	n/a	n/a
180438	Boruchov, Donna	ATHN Data Quality Counts Round 10	ATHN	7/1/18	8/31/19	20 000	1 of 1	n/a	n/a
180800	Boruchov, Donna	A Phase I/III Open-label, Multicenter, Crossover Safety, Efficacy and Pharmacokinetic Study of Recombinant Coagulation Factor VIII (rFVII) Compared to Recombinant Human Antihemophilic Factor VIII (rFVIII; INN: octocog alfa) in Subjects With Hemophilia A, and a Repeat PK, Safety and Efficacy Study (Part 3)	CSL Behring, LLC	10/1/12	9/30/50	-		n/a	n/a
180812	Boruchov, Donna	H7T MC TADO Phase 3, Double Blind, Randomized, Efficacy and Safety Comparison of Prasugrel and Placebo in Pediatric Patients with Sickle Cell Disease	Eli Lilly	8/14/13	9/30/50	-		n/a	n/a
180819	Boruchov, Donna	Single-Dose Study to Evaluate the Pharmacokinetics, Pharmacodynamics, Safety, and Tolerability of Apixaban in Pediatric Subjects at Risk for a Venous or Arterial Thrombotic Disorder	Bristol Myers Squibb	11/22/13	9/30/50	-		n/a	n/a



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180827	Boruchov, Donna	A Phase III Open Label, Multicenter, Extension Study to Assess the Safety & Efficacy of Recombinant Coagulation Factor VII CSL627 in Subjects With Severe Hemophilia A	CSL Behring, LLC	10/27/14	9/30/50	-		n/a	n/a
180832	Boruchov, Donna	A Phase III Open-label Pharmacokinetic, Efficacy and Safety Study of rVIII-Single Chain in a Pediatric Population with Severe Hemophilia A	CSL Behring, LLC	12/24/14	9/30/50	-		n/a	n/a
180860	Boruchov, Donna	A Phase 3, Double-blind, Randomized, Placebo-controlled, Multicenter Study of GBT440 Administered Orally to Patients With Sickle Cell Disease	Global Blood Therapeutics	9/25/17	9/30/50	16 150		n/a	n/a
	Brownell, Elizabeth	Esposito Funds	CT Children's-MOU	4/1/18		6 600			
179466	Carroll, Christopher	Translational Center for Child Maltreatment Studies	DHHS/NIH (Penn State)	4/20/17	3/31/19	25 061	3 of 3	n/a	n/a
180383	Carroll, Christopher	Decreasing Antibiotic Exposure in Infants With Suspected Ventilator-Associated Infection	Gerber Foundation / VCU	3/1/17	4/1/19	9 400	2 of 2	n/a	n/a
180408	Carroll, Christopher	Translational Center for Child Maltreatment Studies	Penn State	4/20/17	3/31/19	6 750	2 of 2	n/a	n/a
180429	Carroll, Christopher	Defining Sociomes in Pulmonary, Critical Care, and Sleep	UConn Storrs	7/1/18	6/30/20	13 800	1 of 2	n/a	n/a
180836	Carroll, Christopher	A Randomized, Open-label, Active Controlled, Safety and Extrapolated Efficacy Study in Pediatric Subjects Requiring Anticoagulation for the Treatment of a Venous Thromboembolic Event	Bristol Meyers Squibb /Pfizer, Inc	5/8/15	9/30/50	5 210	2 of 3	n/a	n/a
180842	Cohen, Jennifer Madan	GWEP 1424	GW Pharmaceuticals	11/3/15	9/30/50			n/a	n/a
180844	Cohen, Jennifer Madan	GWEP 1415	GW Pharmaceuticals	12/11/15	9/30/50	174 211		n/a	n/a
180312	Davey, Brooke	T-Cell Receptor Excision Circles: A Novel Approach to Identify Immunodeficiency in Newborns With Congenital Heart Disease	NE Congenital Cardiology Research Foundation	7/1/15		25 000		n/a	n/a
179256	Demirci, Cem	Type 1 Diabetes TrialNet	DHHS/NIH/NIDDK (Univ South Florida)	9/30/10		2 065		n/a	n/a
180814	DiMario, Francis	A Three-arm, Randomized, Double-blind, Placebo-controlled Study of the Efficacy and Safety of Two Trough-Ranges of Everolimus as Adjunctive Therapy in Patients With Tuberous Sclerosis Complex (TSC) Who Have Refractory Partial-onset Seizures	Novartis Pharmaceuticals Corp	11/8/12	9/30/50	4 921		n/a	n/a
180856	DiMario, Francis	An Open-label, Multicenter Long-term Safety Roll-over Study in Patients With Tuberous Sclerosis Complex (TSC) and Refractory Seizures Who Are Judged by the Investigator to Benefit from Continued Treatment With Everolimus After Completion of Study	Novartis Pharmaceuticals Corp	1/27/17	9/30/50	2 277		n/a	n/a
179381	DuMont-Mathieu, Thyde	Early Detection of Autism	DHHS/NIH (Drexel Univ)	3/1/15	5/31/19	72 255	4 of 4	n/a	n/a
179463	DuMont-Mathieu, Thyde	Connecting the Dots: An RCT-Relating Standardized ASD Screening, Intervention Access, and Long-term Outcomes	DHHS/NIH (Drexel Univ)	9/7/17	5/31/22	79 327	2 of 5	n/a	n/a
180384	DuMont-Mathieu, Thyde	Bridging the Gap: Early Intervention for Underserved Children Within the Medical Home	Connecticut Health Foundation	10/1/17	9/30/18	59 946	1 of 1	n/a	n/a
180850	Dunbar, Nancy	An Observational, Longitudinal, Prospective, Long-term Registry of Patients With Hypophosphatasia	Alexion Pharmaceuticals, Inc.	12/8/16		623	2 of 3	n/a	n/a
179483	Dworkin, Paul	Care Coordination Collaborative	DHHS / HRSA (CT / DPH)	7/1/14	6/30/19	2 077 110	5 of 5	n/a	n/a
180381	Dworkin, Paul	Implementing a Component of the Hartford Blueprint for Women's & Children's Health: Building Early Childhood Providers' Capacity to Strengthen Families Through Developmental Promotion, Early Detection, and Linkage to Services	Hartford Foundation for Public Giving	4/1/17	3/31/20	300 000	2 of 3	n/a	n/a
180740	Emerick, Karan	Evaluation of the Pharmacokinetics, Safety, Tolerability and Efficacy of Entecavir in Pediatric Subjects With Chronic Hepatitis B Virus Who Are HB3AG-Positive	Bristol Myers Squibb	1/1/17	9/30/50	-		n/a	n/a

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180780	Emerick, Karan	A Comparative Study of the Antiviral Efficacy and Safety of Entecavir (ETV) versus Placebo in Pediatric Subjects With Chronic Hepatitis B Virus Infection	Bristol Myers Squibb	10/1/10	9/30/50	7 894		n/a	n/a
180871	Emerick, Karan	M16-123	AbbVie, Inc.	7/19/18	9/30/50			n/a	n/a
180277	Finck, Christine	Use of Neonatal Human-Induced Pluripotent Stem Cells and Human Embryonic Stem Cells in Hyperoxia-Induced Lung Injury	CT Innovations/Jackson Laboratories (UCHC)	1/1/15	6/30/19	750 000	4 of 4	CT Children's	71 543
179457	Finck, Christine	Immune Evasion in Embryonic Stem Cell-based Tissue Repair and Transplantation	DHHS / NIH (UCHC)	5/15/15	3/31/19	59 439	3 of 5	n/a	n/a
	Finck, Christine	Biostage Research Support	CCMC-MOU	10/1/16	9/30/18	158 831			
	Finck, Christine	Nixon Family Fund	CCMC-MOU	01/10/2016		32 700			
	Finck, Christine	Boyer Family Fund	CCMC-MOU	01/10/2017		10 000			
179493	Finck, Christine	Biostage SBIR	DHHS / NIH / Biostage	4/1/18	9/30/19	544 329	1 of 2	UCHC	236 036
179485	Finck, Christine	A Retrievable Autologous Bioengineered Implant as a Novel Treatment in Long-gap Esophageal Atresia	DHHS/NIH/Biostage	4/1/18	9/30/18	74 394	1 of 1	UCHC	39 418
	Finck, Christine	Biostage Supply Funds	CCMC-MOU	01/08/2018		310 500			
	Finck, Christine	Glenn Greenberg Fund	CCMC-MOU	01/01/2019		30 000			
179462	Flores, Glenn	APA Research in Peds (RAPID)	DHHS / NIH / (APA)	8/14/17	6/30/18	35 803		n/a	n/a
179489	Flores, Glenn	APA Research in Peds (RAPID)	DHHS / NIH / (APA)	7/1/18	4/30/19	21 479		n/a	n/a
180441	Frederick, Natasha	Oncology Program	St. Baldrick's	1/1/19	12/31/19	50 000		n/a	n/a
	Germain-Lee, Emily	Mouse Model of Stuge Weber Syndrome	Kennedy Krieger Institute	10/28/16	12/31/18	6 500			
	Germain-Lee, Emily	The Role of G Protein-coupled Signaling in Neurocognitive and Psychosocial Abnormalities	NIH	10/28/16	2/28/19	349 808			
	Germain-Lee, Emily	Hormonal Abnormalities in Sturge Weber Syndrome	Kennedy Krieger Institute	10/28/16	2/28/19	8 168			
179437	Germain-Lee, Emily	The Role of G Protein-coupled Signaling in Neurocognitive and Psychosocial Abnormalities	NIH / NICHD / (UCHC)	3/1/17	2/28/19	29 210	2 of 2	CT Children's	29 210
180872	Germain-Lee, Emily	Evolocumab 20120123	Amgen Inc.	2/1/18	9/30/50			n/a	n/a
UCHC	Germain-Lee, Emily	TGF-beta Family Members and Their Binding Proteins in Aging Skeletal Muscle	DHHS / NIH / NIA / (UCHC)	9/15/17		187 000	1 of 5	n/a	n/a
180417	Gillan, Eileen	Improvement of Infrastructure to Enhance Precision Medicine for Patients with Brain Tumors	Hyundai Hope on Wheels	1/1/18	12/31/18	50 000	1 of 1	n/a	n/a
179669	Haile, Jennifer	Lead Clinic 2017-18	CT / DPH	7/1/17	8/30/18	134 229	1 of 2	n/a	n/a
179675	Haile, Jennifer	Lead Clinic 2018-19	CT / DPH	7/1/18	6/30/19	134 229	2 of 2	n/a	n/a
180402	Hallett, K. Brooke	CATCH Grant	American Academy of Pediatrics	9/1/17	3/31/19	2 000		n/a	n/a
	Hawley, Kelly	Elucidating Innate and Adaptive Immune Interplay in Human Syphilis	Patterson Trust / UCHC	4/1/16	12/31/18	111 946			
180424	Hawley, Kelly	Elucidating Innate and Adaptive Immune Interplay in Human Syphilis	Patterson Trust / UCHC	2/2/18	12/31/18	8 801		n/a	n/a
180804	Heller, Felice	Adult Congenital Heart Disease Enhancement Clinical Research Initiative	Actelion Pharma USA	1/22/13	9/30/50	200		n/a	n/a
	Hollenbach, Jessica	Interrogating the Placental Microbiome Among Pregnant Women with Asthma	Petterson Trust	5/1/18	6/30/19	4 400	1 of 1		
179479	Hussain, Naveed	SIL02	NICHD	6/12/18	9/28/19			n/a	n/a
180343	Hussain, Naveed	SHAPe Grant	Janssen Research & Development LLC	5/12/16	9/30/50			n/a	n/a
180846	Hussain, Naveed	A Multicenter, Double-blind, Randomized, Single Dose, Active-controlled Study to Investigate the Efficacy and Safety of Synthetic Surfactant (CHF 5633) in Comparison to Porcine Surfactant (Poractant Alfa, Curosurf) in the Treatment of Preterm Neonates With Respiratory Distress Syndrome	Chiesi Farmaceutici S.p.A.	5/27/16	9/30/50	-		n/a	n/a
179296	Hyams, Jeffrey	Predicting Response to Standard Pediatric Colitis Therapy: The PROTECT Study	DHHS / NIH / NIDDK	5/1/12				n/a	n/a
179488	Hyams, Jeffrey	Pathogenic Heterogeneity Science Center	University of Texas Health	8/10/18	6/30/23	46 345		n/a	n/a



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180332	Hyams, Jeffrey	Anti-TNF Therapy for Refractory Colitis in Hospitalized Children (ARCH)	CCFA (CCHMC)	11/1/15	3/31/19	6 600		n/a	n/a
180361	Hyams, Jeffrey	Development and Evaluation of the TUMMY CD-index: A Patient-Reported Signs and Symptoms Index for Pediatric Crohn's Disease	Izaak Walton Killam 10/27/16 Health Centre	9/30/50	4 850		n/a	n/a	
180397	Hyams, Jeffrey	A Multicenter Observational Study Targeting the Inflammatory Signature to Personalize Biologics in Pediatric IBD (Refine)	CCFA (CCHMC)	4/18/17	12/31/18	4 520		n/a	n/a
180725	Hyams, Jeffrey	A Multicenter, Prospective, Long-term, Observational Registry of Pediatric Patients With Inflammatory Bowel Disease	Janssen Services, LLC	10/1/10		122 050	9 of 10	n/a	n/a
180753	Hyams, Jeffrey	Investigative Natalizumab Through Further Observational Research and Monitoring Phase IV Registry	Elan Pharmaceuticals	10/1/10		-	8 of 9	n/a	n/a
180756	Hyams, Jeffrey	Risk Stratification and Identification of Immunogenetic and Microbial Markers of Rapid Disease Progression in Children with Crohn's Disease	CCFA (Emory U)	10/1/10		8 800	8 of 9	n/a	n/a
180777	Hyams, Jeffrey	A Multidisciplinary Human Study on the Genetic, Environmental, and Microbial Interactions That Cause IBD	CCFC (Mt. Sinai Hosp)	9/30/10	12/31/19	3 642	7 of 10	n/a	n/a
180808	Hyams, Jeffrey	The ImageKids Study	Shaare Zekeq Medical Ctr	2/21/13	2/20/20	-	5 of 6	n/a	n/a
180815	Hyams, Jeffrey	A Phase 1b Open-label Study to Assess the Safety and Pharmacokinetics of Subcutaneously-administered Golimumab, a Human anti-TNF $\alpha$ Antibody, in Pediatric Subjects With Moderately to Severely Active Ulcerative Colitis	Janssen Research & Development LLC	9/1/13	9/30/50	10 102		n/a	n/a
180830	Hyams, Jeffrey	Safety and Tolerability of Serum-Derived Bovine Immunoglobulin in Children With Diarrhea-Predominant Irritable Bowel Syndrome	Entera Health	11/14/14		-	4 of 5	n/a	n/a
180839	Hyams, Jeffrey	A Long-term, Non-interventional Registry to Assess Safety and Effectiveness of Humira <sup>®</sup> (Adalimumab) in Pediatric Patients With Moderately to Severely Active Crohn's Disease (CD) - CAPE	AbbVie, Inc	8/18/15		10 149	3 of 4	n/a	n/a
180843	Hyams, Jeffrey	A Phase 4, Multicenter, Open-label Study of Serum Infliximab Concentrations and Efficacy and Safety of Dose Escalation in Pediatric Patients With Inflammatory Bowel Disease	Janssen Research & Development LLC	12/14/15		6 750		n/a	n/a
180857	Hyams, Jeffrey	A Phase 3, Randomized, Double-Blind, Placebo-Controlled, Multicenter Study to Investigate the Efficacy and Safety of Mongersen (GED-0301) for the Treatment of Adults and Adolescent Subjects With Active Crohn's Disease	Celgene, Inc.	8/17/17	9/30/50	8 000		n/a	n/a
180858	Hyams, Jeffrey	A Randomized Double-blind Pharmacokinetic Study of Ustekinumab in Pediatric Subjects With Moderately to Severely Active Crohn's Disease	Janssen Research & Development, LLC	6/16/17	9/30/50	7 500		n/a	n/a
180859	Hyams, Jeffrey	A Phase 2, Randomized, Double-blind, Dose-ranging Study to Determine the Pharmacokinetics, Safety and Tolerability of Vedolizumab IV in Pediatric Subjects With Ulcerative Colitis or Crohn's Disease	Takeda Development Center Americas, Inc.	9/22/17	9/30/50	9 071		n/a	n/a
180863	Hyams, Jeffrey	A Phase 2b, Extension Study to Determine the Long-term Safety of Vedolizumab IV in Pediatric Subjects With Ulcerative Colitis or Crohn's Disease	Takeda Development Center Americas, Inc.	10/3/17		-	1 of 2	n/a	n/a
180867	Hyams, Jeffrey	Celgene GED-0301-CD-004	Celgene Corp.	6/12/17	4/30/18			n/a	n/a
180869	Hyams, Jeffrey	CA40192	Genentech Inc.	8/3/18	9/30/50			n/a	n/a
179356	Isakoff, Michael	National Clinical Trials Network Grant	*DHHS / NIH / NCI / COG (CHOP)*	3/1/14	2/28/19	3 000	5 of 6	n/a	n/a
179357	Isakoff, Michael	Children's Oncology Group Federally Sponsored Studies - Per Case Reimbursement	*DHHS / NIH / NCI / COG (CHOP)*	3/1/14	2/28/19	70 850	3 of 4	n/a	n/a

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179374	Isakoff, Michael	Study Chair National Clinical Trials Network Grant	*DHHS / NIH / NCI / COG (CHOP)*	5/2/18	8/31/18	7 805	4 of 5	na	na
180206	Isakoff, Michael	Neuroblastoma and Medulloblastoma Translational Research Consortium Sponsored Studies	Spectrum Health	10/1/10	9/30/50	-		n/a	n/a
180213	Isakoff, Michael	Children's Oncology Group Industry Sponsored Studies - Per Case Reimbursement	COG (CHOP)	3/1/12	9/30/50	63 305		n/a	n/a
180250	Isakoff, Michael	Moffitt Institute Sponsored Studies - Per Case Reimbursement	H. Lee Moffitt Cancer Center and Research Institute Hospital, Inc	5/24/13	9/30/50	2 414		n/a	n/a
180382	Isakoff, Michael	Project Everychild	COG Foundation (CHOP)	2/22/17	9/30/50	-		n/a	n/a
180420	Kahn, Owen	Back-to-Bedside	ACGME	1/1/18	12/31/19	10 000	1 of 2		
180325	Kalsner, Louisa	Adaptive Clinical Genomics for Precision Medicine	CBIF (The Jackson Laboratories)	6/16/16	12/31/18	76 254	2 of 3	n/a	n/a
180349	Kalsner, Louisa	TSC2 Variants Without Clinical Findings of Tuberous Sclerosis Complex as a Risk Factor for Idiopathic Autism Spectrum Disorder	UCONN Storrs	7/1/16	6/30/19	37 118	3 of 3	n/a	n/a
179465	Lainwala, Shabnam	Multi-Omics Analysis of Pain/Stress Impact on Neurodevelopment in Preterm Infants	DHHS / NIH / NINR (UConn Storrs)	9/14/17	7/31/21	410 794	2 of 4	n/a	n/a
180386	Lapin, Craig	Care Center Award	Cystic Fibrosis Foundation	7/1/17	6/30/18	72 069	2 of 2	n/a	n/a
180399	Lapin, Craig	A Multi-Center, Placebo-controlled, Double-blind, Randomized Study Evaluating the Role of Oral Glutathione on Growth Parameters in Children with Cystic Fibrosis	CFFT (Seattle Children's)	7/1/16	9/30/50	8 802		n/a	n/a
180415	Lapin, Craig	Mental Health Coordinator	Cystic Fibrosis Foundation	1/1/18	12/31/19	121 666		n/a	n/a
180416	Lapin, Craig	Therapeutics Development Center	Cystic Fibrosis Foundation	1/1/18	12/31/18	64 951		n/a	n/a
180428	Lapin, Craig	CF Nurse & Nutrition	Cystic Fibrosis Foundation	7/1/18	6/30/19	65 425		n/a	n/a
180770	Lapin, Craig	Controlled Trial of Two Adherence Promotion Interventions for Cystic Fibrosis, [I Change Adherence and Raise Expectations (I CARE)]	Novartis Pharmaceuticals Corp / Univ of Miami	10/1/10	12/31/19	-	8 of 9	n/a	n/a
180801	Lapin, Craig	A Long-term Prospective Observational Safety Study of the Incidence of and Risk Factors for Fibrosing Colonopathy in US Patients With Cystic Fibrosis Treated With Pancreatic Enzyme Replacement Therapy	Seattle Children's Hosp	10/8/12	9/30/50	15 002		n/a	n/a
180803	Lapin, Craig	A Phase 3, Two-arm, Rollover Study to Evaluate the Safety of Long-Term Ivacaftor Treatment in Subjects 6 Years of Age and Older With Cystic Fibrosis and a Non-G551D CFTR Mutation	Vertex Pharmaceuticals	12/21/12	9/30/50	-		n/a	n/a
180811	Lapin, Craig	A Phase 3, Randomized, Double-blind, Placebo-controlled, Parallel Group Study to Evaluate the Efficacy and Safety of Lumacaftor in Combination With Ivacaftor in Subjects Aged 12 Years and Older with Cystic Fibrosis, Homozygous for the F508del-CFTR Mutation	Vertex Pharmaceuticals	6/9/13	9/30/50	-		n/a	n/a
180816	Lapin, Craig	A Point-Prevalence Study to Evaluate the Prevalence of Antibodies to Selected Porcine Viruses in Patients With Cystic Fibrosis Who Are Receiving Porcine-derived Pancreatic Enzyme Replacement Therapy: A Harmonized Protocol Across Sponsors	AbbVie, Inc; Aptalis Pharma, Inc; Janssen Research & Development LLC	9/1/13		18 150	5 of 6	n/a	n/a
180820	Lapin, Craig	A Phase 3, Rollover Study to Evaluate the Safety and Efficacy of Long-term Treatment With Lumacaftor in Combination With Ivacaftor in Subjects Aged 12 Years and Older With Cystic Fibrosis, Homozygous or Heterozygous for the F508del-CFTR Mutation	Vertex Pharmaceuticals	11/22/13		-	5 of 6	n/a	n/a
180848	Lapin, Craig	A Phase 4, Open-label Treatment, Randomized, Multicenter, 2-arm, Parallel-group, Pilot Study of Adherence to Lumacaftor/Ivacaftor in CF Subjects Homozygous for the F508del-CFTR Mutation	Vertex Pharmaceuticals	7/15/16	9/30/50	27 515		n/a	n/a



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180873	Lapin, Craig	VX16-809-120	Vertex Pharmaceuticals	11/9/18	9/30/50			n/a	n/a
	Lee, Youngmok	Comparison of Vectors and Optimization of Dosages for Renal Vein Injection Method in GSD-1a Mice	Dimension Therapeutics, Inc.	5/1/17	4/30/19	500 000	2 of 2		
	Lee, Youngmok	Exosome Marker Development for Hepatocellular Adenoma in Human GSD-1a	The Children's Fund for Glycogen Storage Disease Research	9/1/18	8/30/19	37 039	1 of 1		
	Lee, Youngmok	Research Development to Improve Efficacy of AAV-Mediated Gene Therapy in GSD-1a Mouse Model	The Children's Fund for Glycogen Storage Disease Research	8/1/18	8/30/20	284 826	1 of 2		
	Lee, Youngmok	Research Support	The Children's Fund for Glycogen Storage Disease Research	12/1/18	11/30/20	153 011	1 of 2		
180837	Madan-Cohen, Jennifer	An Open-Label, Phase I, Pharmacokinetic Study of Single Doses of Intranasal Midazolam (USL261) in Pediatric Subjects with Epilepsy	Upsher-Smith Laboratories, Inc	5/20/15	9/30/50	-		n/a	n/a
180838	Madan-Cohen, Jennifer	A Randomized, Double-blind, Placebo-controlled Study to Investigate the Efficacy and Safety of Cannabidiol (GWP42003-P; CBD) as Adjunctive Treatment for Seizures Associated With Lennox-Gastaut Syndrome in Children and Adults	GW Research Ltd	5/22/15	9/30/50	5 500		n/a	n/a
180842	Madan-Cohen, Jennifer	A Randomized, Double-blind, Placebo-controlled Study to Investigate the Efficacy and Safety of Cannabidiol (GWP42003-P) in Children and Young Adults with Dravet Syndrome	GW Research Ltd	11/3/15	9/30/50	36 765		n/a	n/a
180844	Madan-Cohen, Jennifer	An Open Label Extension Study to Investigate the Safety of Cannabidiol (GWP42003-P; CBD) in Children and Adults With Inadequately Controlled Dravet or Lennox-Gastaut Syndromes	GW Research Ltd	12/11/15	9/30/50	14 187		n/a	n/a
180388	Mason, Sherene	Maintenance Therapy Withdrawal of Mycophenolate Mofetil in Pediatric Proliferative Lupus Nephritis: A Multicentered Retrospective Cohort Study	CARRA	4/21/17	3/8/19	13 800	2 of 2	n/a	n/a
UCHC	Matson, Adam	Multi-Omics Analysis of Pain/Stress Impact on Neurodevelopment in Preterm Infants	NIH/Storrs	4/1/17	3/31/21	316 448	2 of 5	Fee For Service	87 023
UCHC	Matson, Adam	Multi-Omics Analysis of Pain/Stress Impact on Neurodevelopment in Preterm Infants	DHHS / NIH / NINR (UConn Storrs)	9/14/17		87 023	1 of 5	n/a	n/a
	Matson, Adam	Neonatal Microbiome Project	Stevenson Fund (CCMC MOU)	12/31/19	12/31/22	235 000	1 of 5	X	45000
179368	Ohannessian, Christine	Treatment of Co-Occurring Alcohol Use Disorders and Depression/Anxiety Disorders	DHHS / NIH (UCHC)	8/1/14	1/1/19	32 823	5 of 5	CT-Children's	n/a
179392	Ohannessian, Christine	Bidirectional Effects Between Parental Work-Family Conflict and Adolescent Psychosocial Adjustment	DHHS / NSF	12/1/15	11/30/19	231 071	4 of 4	n/a	n/a
180339	Orsey, Andrea	Thrombotic Thrombocytopenic Purpura (TPP) Registry	Baxalta (Univ Hosp of Bern)	3/19/16	3/18/22	2 100	2 of 2	n/a	n/a
180385	Orsey, Andrea	A Validity Study of Integrated Care Delivery Guidelines for AIC	St. Baldrick's Foundation	7/1/17	6/30/19	50 000	2 of 2	n/a	n/a
180792	Orsey, Andrea	An Open-Label, Multicenter Study of the Safety of Twice Daily Oxycodone Hydrochloride Controlled-release Tablets in Opioid Experienced Children From Ages 6 to 16 Years Old	Purdue Pharma LP	10/19/11		-		n/a	n/a
180829	Ratzen, Susan	Answer Registry	Novo Nordisk	10/29/14	9/30/50	7 250		n/a	n/a
179470	Rogers, Steven	Mental Health Care Pediatric	CT / DCF	2/23/18	12/31/19	150 000		n/a	n/a
179471	Rubin, Karen	Telehealth Network Grant Program	DHHS / HRSA (Community Health Center, Inc)	9/1/16	8/31/20	90 000	3 of 4	n/a	n/a
179677	Rubin, Karen	Connecticut Newborn Screening	CT / DPH	7/1/18	6/30/21	1 797 531	1 of 3	n/a	n/a
180631	Rubin, Karen	Short Stature Study (179015)	Eli Lilly	10/1/10				n/a	n/a
180717	Rubin, Karen	Girls Turner Syndrome	Eli Lilly	10/1/10	2/1/18	-	9 of 12	n/a	n/a
	Salazar, Juan	Ryan White B	DPH	4/1/17	3/31/19	97 607	3 of 3	X	
185018	Salazar, Juan	Ryan White D 2017-18	DHHS / HRSA	8/1/17	7/31/18	478 008	1 of 3	UCHC	219 611
185019	Salazar, Juan	Ryan White A 2018-19	DHHS / HRSA (City of Hartford)	3/1/18	2/28/19	197 709		UCHC	6 707

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185021	Salazar, Juan	Ryan White D 2018-19	DHHS / HRSA	8/1/18	7/31/19	357 831	2 of 3	UCHC	183 960
	Salazar, Juan	Ryan White A	CCSG	1/1/19	2/28/19	6 707		X	
	Salazar, Juan	DPH HIV Prevention	DPH	1/1/19	12/31/21	100 000	1 of 3	X	70 700
180270	Salazar, Olga	ARC-O. Salazar	The Jackson Laboratory	11/1/14	9/30/18	15 807	4 of 4	n/a	n/a
180292	Salazar, Olga	Role of Aerobic Exercise	The Maxilian E. & Marion O. Hoffman Foundation, Inc.	12/16/14	12/31/18	50 000		n/a	n/a
180326	Salazar, Olga	Establishing Cardiac Magnetic Resonance Imaging as the Standard Care for Childhood Cancer Patients	Hartford Foundation for Public Giving	1/1/17	12/31/18	112 000	2 of 2	n/a	n/a
180304	Santos, Melissa	Creating Pain and Weight Treatment	CHIP (UConn Storrs)	5/15/15	5/14/18	30 000		n/a	n/a
180862	Sayej, Wael	Oral Budesonide Suspension (OBS) in Adolescent and Adult Subjects (11 to 55 Years of Age, Inclusive) With Eosinophilic Esophagitis: A Phase 3 Randomized, Double-blind, Placebo-controlled Study	Shire Human Genetic Therapies, INC.	10/25/17	9/30/50	-		n/a	n/a
180864	Sayej, Wael	Oral Budesonide Suspension (OBS) in Adolescent and Adult Subjects (11 to 55 Years of Age, Inclusive) With Eosinophilic Esophagitis: A Phase 3 Randomized, Double-blind, Placebo-controlled Study	Shire Human Genetic Therapies, INC.	10/25/17	9/30/50	30 451		n/a	n/a
179375	Silva, Cynthia	Integrative Proteomics & Metabolomics for Pediatric Glomerular Disease Biomarkers	*DHHS/NIH/NIAD (Nationwide Children's Hospital)*	6/1/14	5/31/18			n/a	n/a
180337	Silva, Cynthia	NephCure Kidney Foundation - CureGN	NephCure Kidney Fdn (Nationwide Children's Hospital)	1/21/15	12/31/18	1 000	3 of 3	n/a	n/a
180412	Silva, Cynthia	Practice Pattern Outcomes in Achar Use in Children With Nephrotic Syndrome	North American Pediatric Renal Transplant Cooperative Study	11/9/17	11/8/20	-		n/a	n/a
180407	Silverman, Adam	Haitian Pediatric Critical Care Collaborative Training Course	CHEST Foundation	9/15/17	12/31/18	10 320	1 of 1	n/a	n/a
179487	Simoneau, Tregony	CASK - Controlling and Preventing Asthma Progression and Severity in Kids	NIH/National Institute of Allergy and Infectious Diseases / Boston Children's Hospital	5/1/18	6/30/19	100 000	1 of 6	n/a	n/a
180328	Simoneau, Tregony	Optimization of Home Oxygen Weaning in Premature Infants	Patient-Centered Outcomes Research Institute (Boston Children's)	1/1/15		1 000	3 of 4	n/a	n/a
180330	Simoneau, Tregony	Asthma Study With Albuterol	Dr. Salazar Funds from 178560	5/1/15		20 000		n/a	n/a
180410	Simoneau, Tregony	Identifying Biomarkers of Allergic Asthma	Patterson Trust	1/1/18	12/31/19	95 000	2 of 2	n/a	n/a
180432	Simoneau, Tregony	Creating an Asthma Network	Cigna Foundation	8/27/18	8/26/20	230 256	1 of 2	n/a	n/a
180845	Tory, Heather	Efficacy, Safety and Tolerability of Tofacitinib for Treatment of Polyarticular Course Juvenile Idiopathic Arthritis (JIA) in Children and Adolescent Subjects	Pfizer, Inc	5/1/16		18 458	2 of 3	n/a	n/a
180853	Tory, Heather	A Long-term, Open-label Follow-up Study of CP-690,550 for Treatment of Juvenile Idiopathic Arthritis (JIA)	Pfizer, Inc	1/24/17		3 757	1 of 2	n/a	n/a
180786	Trapp, Christine	Colesevelam Oral Suspension as Monotherapy or Add-On to Metformin Therapy in Pediatric Subjects with Type 2 Diabetes Mellitus	Daiichi Sankyo, Inc	12/15/10	9/30/50	1 500	6 of 7	n/a	n/a
180411	Trout, Nancy	Childhood Obesity EPIC Modules	CHDI of CT Inc.	1/1/18	12/31/19	23 750	1 of 2	n/a	n/a
179379	Waynik, Ilana	Infant Specific IgE, Rhinovirus C Bronchiolitis, and Incident Asthma in MARC-35	DHHS / NIH / Mass General	12/1/14	11/30/18	8 660	4 of 5	n/a	n/a
179439	Waynik, Ilana	Airway Microbiome and Age 6y Asthma Phenotypes in 2 Diverse Multicenter Cohorts	DHHS / NIH / Mass General	9/21/16	8/31/18	849		n/a	n/a
179440	Waynik, Ilana	Nasal MicroRNA During Bronchiolitis and Age 6y Asthmaphenotypes: MARC-35 Cohort	DHHS / NIH / Mass General	12/6/16	11/30/19	-		n/a	n/a
	Weinstein, David	Glycogen Storage Disease Program Fund	Foundation	11/1/16	N/A	22 772			
	Weinstein, David	Global Center Glycogen Storage Disease Fund	Foundation	10/1/16	N/A	72 695			
	Weinstein, David	The Jonah Pournazarian Fund for Glycogen Storage Disease Type 1b Research	Foundation	12/1/16	N/A	84 127			
180852	Weinstein, David	A Comparison of Glycosade® and Uncooked Cornstarch (UCCS) for the Dietary Management of Hepatic Glycogen Storage Diseases (GSD), Glyde Trial	(International) Limited, a Nestle Health Science company	12/29/16	9/30/50	184 530		n/a	n/a



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UCHC	Weinstein, David	Gene Therapy Study	Dimension Therapeutics	1/1/17	12/31/18	500 000		n/a	n/a
UCONN FDN	Weinstein, David	Glycogen Storage Disease	Donations Program	1/1/17	12/31/18	616 213		n/a	n/a
	Weinstein, David	Glycogen Storage Disease Type 6	Foundation	3/1/17	N/A	1 462			
	Weinstein, David	Glycogen Storage Disease Type 1A Research Fund	Foundation	9/1/17	N/A	500			
	Weinstein, David	The Jamie Konieczka Fund for Glycogen Storage Disease Type 1B Research	Foundation	9/1/17	N/A	3 094			
	Weinstein, David	Adeline Liem Fund for GSD Type 1A Research	Foundation	10/15/17	N/A	13 945			
	Weinstein, David	A Phase 1/2, Open-Label Safety and Dose Finding Study of Adeno-Associated Virus (AAV) Serotype 8 (AAV8)-Mediated Gene Transfer of Glucose-6-Phosphatase(G6Pase) in Adults with Glycogen Storage Disease Type 1a	Ultragenyx Pharmaceuticals, Inc.	5/18/18	6/30/20	186 763	1 of 2		
	Weinstein, David	Glycogen Storage 1B Disease Research Fund	Foundation		N/A	52 249			
	Weinstein, David	Nina Contreras D'Agosto Fund	Foundation	8/27/18	N/A	19 553			
	Weinstein, David	John F. Crigler, Jr., Gene Therapy Fund for GSD	Foundation	8/6/18	N/A	2 045			
	Weinstein, David	Ketotic Glycogen Storage Disease Research Fund	Foundation	10/19/18	N/A	11 645			
	Weinstein, David	GSD Type 1b General Research Fund	Foundation	10/19/18	N/A	19 050			
180371 / 180413	Wiley, Catherine	Two-Generation Pediatrics Project	United Health Fdn (The Village for Families & Children, Inc.)	1/1/17	12/31/19	454 022	3 of 3	n/a	n/a
180421	Wiley, Catherine	Rx for Success	Grossman Family Fund / Reach Out and Read	3/1/18	6/30/19	61 640		n/a	n/a
180828	Wolkoff, Leslie	A Phase 1b/1a Randomized, Placebo Controlled Study of the Safety and Efficacy of Once Daily Dosing of STP206 in Premature Very Low Birth Weight and Extremely Low Birth Weight Neonates	Sigma-Tau Pharmaceuticals, Inc	11/13/14	9/30/50	23 038		n/a	n/a
180835	Wolkoff, Leslie	Multi-Center Observational Study Regarding the Non-Interventional Surveillance Study of Respiratory Syncytial Virus Hospitalizations Among Infants Born at 29 to 35 Weeks Gestational Age Not Receiving Immunoprophylaxis	Astra Zeneca Pharmaceuticals, LP	3/6/15	9/30/50	-		n/a	n/a
180861	Wolkoff, Leslie	A Phase 2b Randomised, Double-blind, Placebo-controlled Study to Evaluate the Safety and Efficacy of MEDI8897, a Monoclonal Antibody With an Extended Half-life Against Respiratory Syncytial Virus, in Healthy Preterm Infants	MedImmune, LLC	10/18/17	9/30/50	24 063		n/a	n/a
180323	Zemel, Lawrence	Observational Study of Pediatric Rheumatic Diseases: The CARRA Registry	CARRA (Duke Univ)	11/18/15	9/30/50	3 025		n/a	n/a
180742	Zemel, Lawrence	A 12-Week Randomized, Double-blind, Placebo-Controlled, Parallel Group, Two-arm Study to Evaluate the Efficacy and Safety to Tocilizumab in Patients With Active Juvenile Idiopathic Arthritis: With 92-week Single Arm Open-label Extension to Examine the Long-term Use of Tocilizumab	Roche Laboratories, Inc	10/1/10	9/30/50	-		n/a	n/a
180794	Zemel, Lawrence	Phase 3, Multi-center, Open-label Study to Assess the Pharmacokinetics, Safety and Efficacy of Certolizumab Pegol in Children and Adolescents With Moderately to Severely Active Polyarticular-course Juvenile Idiopathic Arthritis	UCB, Inc	6/12/12	9/30/50	10 466		n/a	n/a

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180813	Zemel, Lawrence	A Phase 3 Multi-center, Open-Label Study to Evaluate Pharmacokinetics, Efficacy and Safety of Abatacept Administered Subcutaneously (SC) in Children and Adolescents With Active Polyarticular Juvenile Idiopathic Arthritis (pJIA) and Inadequate Response (IR) to Biologic or Non-biologic Disease Modifying Anti-rheumatic Drugs (DMARDs)	Bristol-Myers Squibb	9/2/13	9/30/50	-		n/a	n/a
180817	Zemel, Lawrence	A Phase 1b Open-label Multicenter Study to Investigate Pharmacokinetics, Pharmacodynamics, and Safety of Tocilizumab Following Subcutaneous Administration in Patients With Polyarticular-course Juvenile Idiopathic Arthritis	Genentech	11/22/13	9/30/50	-		n/a	n/a
180818	Zemel, Lawrence	A Phase 1b Open Label Multi-Center Study to Investigate Pharmacokinetics, Pharmacodynamics, and Safety of Tocilizumab Following Subcutaneous Administration in Patients with Systemic Juvenile Idiopathic Arthritis	Genentech	11/22/13	9/30/50	-		n/a	n/a
180834	Zemel, Lawrence	8-SPECIFIC 4 Patients: Study of Pediatric Efficacy and Safety With First-line Use of Canakinumab. An Open-label Canakinumab (ACZ885) Dose Reduction or Dose Interval Prolongation Efficacy and Safety Study in Patients With Systemic Juvenile Idiopathic Arthritis (SJIA)	Novartis	11/14/14	9/30/50	-		n/a	n/a
179434	Zempsky, William	I Can Cope With Sickle Cell Disease	DHHS/NIH/NICHD (Seattle Children's Research Institute)	9/1/16	8/31/19	159 940	3 of 3	n/a	n/a
179455	Zempsky, William	Multi-site Randomized Clinical Trial of FIT Teens for Juvenile Fibromyalgia	DHHS/NIH/NIAMS (CCHMC)	6/21/17	5/31/19	309 008	2 of 2	n/a	n/a
180389	Zempsky, William	M1 Mentoring Program	Connecticut Institute for Clinical & Translational Science (CICATS)	7/1/17	6/30/20	55 000		n/a	n/a
180802	Zempsky, William	An Open-label, Multicenter Study of the Safety, Pharmacokinetics, and Efficacy of Buprenorphine Transdermal System (BTDS) Opioid Analgesia for Moderate to Severe Pain	Purdue Pharma, LP	12/21/12	9/30/50	1 579		n/a	n/a



